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VOLUME 114
NUMBER 1
JULY 1957

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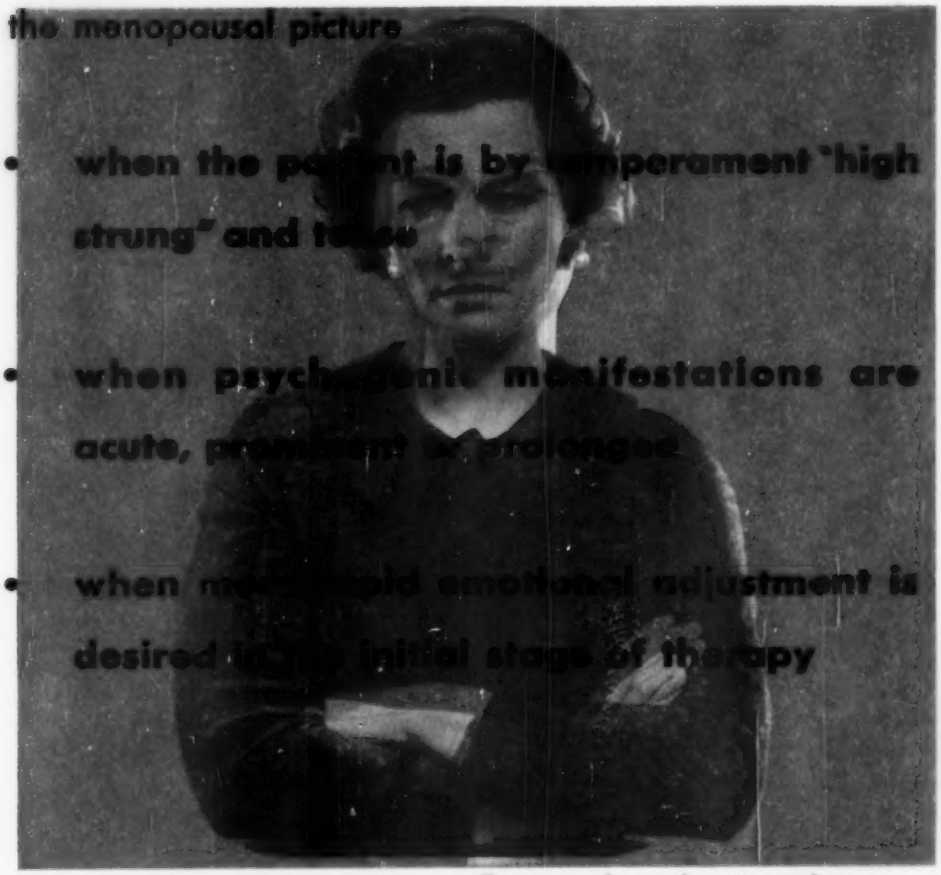

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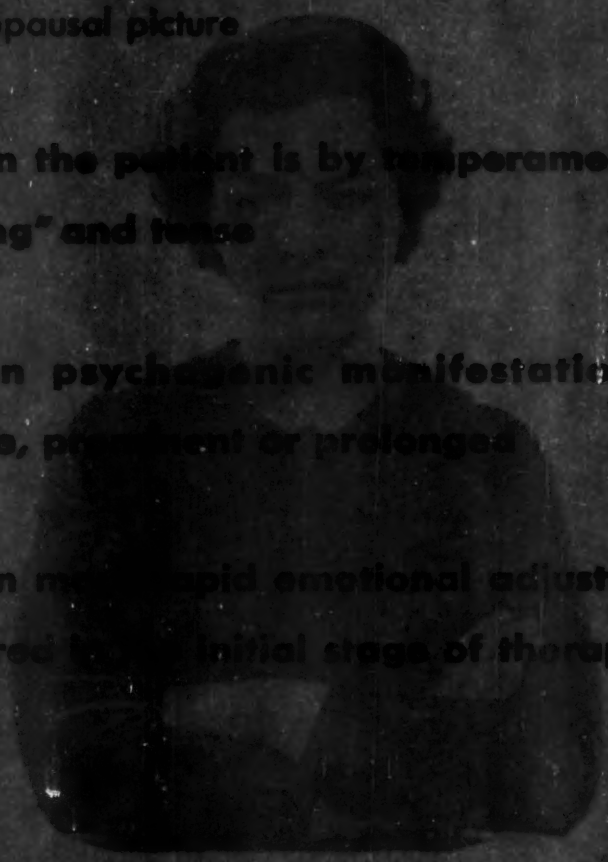

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1. Figurelli, F.A.: Indust. Med. & Surg. 25:376 (Aug.) 1956.

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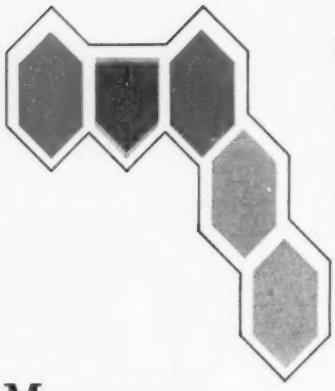

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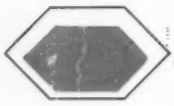

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FOREWORD

Just as there is no longer a place by the fireside for grandfather to sit and smoke his pipe, so there is really no room for the president of this group to give a report on the state of affairs of the Association. This is no complaint—he can do it, of course, but it is done so much better now by the administrative officers and by the various chairmen that another report would be redundant.

I shall not try to express my thanks to you; I would make a bad job of it. You know how I feel upon receipt of this, the highest honor you have to confer. To the officers and the various staffs I shall express my thanks privately and clumsily, I am sure. To paraphrase Mr. Churchill, never has any one man been indebted to so many for so much. I return this office to you with humility and affection and the hope that I have guarded it well.

Along with the reportorial function, another door is now closed to the president of the Association. Everyone, who has followed his peregrinations in the News Letter, knows that he has had little time for research—yea, even little time for clinical observation—while he rushed from hearing to meeting, and from trains to planes. And yet, by hallowed custom, a discourse is required of him as he turns over his badge of office. There is only one path open to him then—the philosophic. He can examine the status of the discipline and see how it fares in relationship to its sister specialties and to art and science in general. This I shall do and shall examine our relationship to the science of man, for it is time now to consider the location of our art and science in space and perhaps to scan the horizon and attempt to determine the directions which our specialty is taking.

[1] Presidential Address delivered at the 113th annual convention of The American Psychiatric Association, May 13-18, 1957, Chicago, Ill.

I

When the theoretical physicists, Doctors Lee and Yang, recently challenged the principle of parity, their work shattered completely one of the basic laws which had been built into all physical theories in the past thirty years. This had been a philosophically pleasing theory—this idea of mirror symmetry of submicroscopic particles—which they demolished and, worse and more of it, it had consistently borne fruit in the making of successful predictions about atomic and nuclear processes. This is worthy of our attention—the theory was erroneous; yet successful predictions were made from it. Now, suddenly, this attractive theory was destroyed and we are told that there is no one who can say when or how the pieces will be put together again. In the early stages of their work, the young scientists could hardly have suspected the widespread implications their findings would have, but before long it became apparent that an obstacle was removed and a way was now clear and, out of the intellectual ferment and ceaseless reexamination of principles the new discovery had initiated, there might eventuate something which thus far had eluded all scientists. This eventuality hopefully might be a unified field theory encompassing all of the laws of matter, energy and the universe.

This little drama of physical science had its counterpart in the last decade of the last century when Freud challenged the then current ideas regarding the etiology of emotional disorder. These ideas, too, had been philosophically comfortable and they had been held in various guises for many years. Freud's brilliant observations, unrecognized and unappreciated at first, are now seen to have signalled a turning point, not only in psychology, but also in science, and from them another eventuality might also stem—in this case a step toward a unitary or inte-

grated approach to the science of man. Some aspects of the new theory, as propounded first, would have to be changed, but even from these would come some successful predictions about the emotional reaction of man.

While the potentialities of the physicists' ideas were recognized quickly, Freud's revolutionary ideas were missed entirely. They were even overlooked by Freud and his colleagues, for they did not realize that here were the precursors of an entirely new system of thought, one which would require an approach entirely different from that being applied to the formulations of general medicine. Unhappily, this new system was forced into the then extant and waiting molds of scientific thought, though it took procrustean techniques to do it. Had the newness and the significance of these ideas been recognized and had they been followed to their logical conclusion, instead of being pushed into convenient molds, much of the bitterness and opposition which their promulgation engendered would have been avoided. It is only now that the far reaching importance of these ideas and insights are being fully appreciated. Their influence penetrates into many disciplines; they are more by far than a treatment and research method; buried in them are precious creative currents and, in the words of Karl Stern,[2] as a result of what we have learned from them, "our image of the interior world of man can never be the same as it was prior to 1894."

The beginnings of a new era are usually not recognized by the pioneers who are working in it. Ordinarily they proceed, thinking and operating in the approved categories of the time, unaware of the revolutionary aspects of their work. It was ever thus. It is the historian who retrospectively sees indications of approaching revolution at a time when few are aware that their traditional world is in rapid change. Though it may seem paradoxical in the light of some present day teaching, viewed in the light of history this new psychology heralded the end of a purely mechanistic concept of man.

Once again, as we meet here today, there are omens and portents which indicate that we are on the threshold of other major changes. The tell-tale symptoms and signs are those of restless inquiry, examination and reexamination. Many of the major medical disciplines are in a state of transition, as are the physical sciences. The Joint Commission on Mental Health is about its important comprehensive investigations. Psychoanalysis is examining itself as a discipline and seeking to evaluate its efforts and its results and its directions, and one might prognosticate that the findings will herald an even closer rapprochement with medicine.

Medical educators are in full scale reassessment of their curricula, due to the realization that, despite their high standards, something is still lacking in their finished product. The practice of medicine itself is changing and, as Atchley[3] puts it, the doctor now, "instead of being satisfied to merely identify his patient's condition with a large group of similar diseases, tries to analyze all the various abnormal components in this one person and thus reach an appraisal, rather than apply a label."

Verily, then, these are times of change—these are the best of times; these are the worst of times—we have everything before us; we have nothing before us. There are sounds of trouble in the distance, but the click of Madame Defarge's needles now is supplanted by the sound of the Geiger counter symbolic of a nuclear age. In this transitional phase, as psychiatry reexamines itself, it seeks to find its place in the scheme of things. Until now it has been lusty, sprawling, verbose and growing apace. It is wise to examine itself while there is still an earth for the meek to inherit.

If the present state of psychiatry is envisaged as one of transition or transformation, there arise certain problems of gravity which the psychiatrist has to consider in full consciousness of his responsibility and hence, in seriousness and humility. The future development of his discipline depends upon the solution of these problems, as does the value of the services he will render to mankind. Though philosophers may discuss whether the events of history follow their own intrinsic, inexorable laws, or whether they be directed to some extent by man's doings, we

[2] The Third Revolution. Karl Stern, Harcourt Brace & Co., N. Y.

[3] The Changing Physician. Dana W. Atchley, The Atlantic Monthly, Aug. 1956.

must act, as Ignatius Loyola says, as if everything depended upon us, even though we know that nothing depends upon us alone.

Modern psychiatry, by virtue of its intrinsic developments on the one hand, and by the demands made by society on the other, differs from what it was even a quarter century ago. It no longer focuses entirely upon mental disease, nor the individual as a "mental patient," but rather it envisages man in the totality of his being and in the totality of his relationships. Consequently, the place of psychiatry within the system of medicine, as well as within the complex of all disciplines concerned with man, his nature, his work and his destiny, also has changed. If one designates the totality of all disciplines concerned with the manifold aspects of human being and doing as *humanism,* then psychiatry has become a *humanistic* discipline. It has become an essential part of an over-all science of man—of general anthropology. The movement of psychiatry in this direction and the ensuing transformation of psychiatric thinking is not an isolated phenomenon. It is expressive of a new turn in the manner in which man looks at himself. It was Sherrington who said: "Man in his mood may count himself in his day a brief spectator of his own shaping as it still progresses."

Psychiatry by becoming more humanistic need not in any way become less scientific. Scientific inquiry and methodology must always form the solid foundation of our discipline, but upon this foundation must be erected the edifice of a psychiatry which will be an applied science of man. The humanistic tendencies of our discipline have already proved a stumbling block for some of our medical colleagues. Because of some misunderstanding, they equate the humanistic aspects of our approach with a meddlesome form of do-goodism; yet nothing can be further from the truth. Humanism and a scientific approach to the science of man are not mutually exclusive. By science we mean here not mathematical science in the narrow sense of the term, but the meaning which it had of old: "encompassing and well ordered knowledge." One might even say the ideal goal of the psychiatrist is to achieve wisdom. The best one can do, of course, is to aspire to this attainment and the first step toward it is that of recognizing one's limitations, of being conscious, as was Socrates, that one knows nothing in comparison with what he should know. Psychiatry can be justly proud of its achievements in the relatively short time in which it has functioned as a discipline; yet at the same time it is required to be humble because of what it does not know and because of the enormous problems which still face it. Paradoxically, wisdom is a mixture of humility and legitimate pride.

If psychiatry is to take its proper place in the science of man, it must be aware of its limitations and realize that it is only a part of this science, an important but a small part insofar as the general knowledge of man is concerned. To forget this is to run the danger of scientific imperialism. By this term I mean to indicate the tendency, encountered regularly in the history of knowledge, to credit a special discipline with universal significance. The final result of such enthronement is always the catastrophic dethronement of the apparently supreme branch of knowledge. You have seen this little melodrama even within the framework of psychiatry itself. If you cast about you, you will see it on an even larger scale in the form of a cloud of anti-scientific attitude, "no bigger than a man's hand," but there nonetheless. It is an increasing unwillingness to see in science a world-saving panacea or to believe in the possibility of solving all human problems by means of scientific inquiry. If this cloud enlarges, it is because the scientists, or perhaps better the popularizers of science, have indulged in this imperialism and failed to recognize that human existence shows facets where science and her methodology prove insufficient. The same danger faces psychiatry, if its popularizers become too enthusiastic or its enthusiasts become too popular.

We would indeed lose many of our gains if we were injudicious enough to inflate the importance of our discipline in human affairs. There is at times a strong temptation to do this, as various questioners flatter us into making statements beyond our competence. Our specialty might have been put in a ludicrous light by some enthusiasts immediately after World War II. Do you remember the reductionism in the concepts and the arrogance with which they were to be applied?

The paradigm was simple—the proponents were flush with remembrance of recent accomplishment and recent victory. The reasoning went something like this: Fights and wars are caused by hostility in men. We understand and treat hostility. We shall do this on a large scale. Ergo, we will stop wars. Do you remember that chauvinism? Fortunately, wiser heads prevailed or it might have been dangerous. We spoke above of our need for humility and wisdom and now we see the need to add prudence to these virtues.

We must beware of attempting to derive universal principles or rules for a general science of man from our limited observations. It is necessary for us to keep in mind the fact that we deal with one group of human beings and with reactions in some way abnormal. It is wise to remember also that the study of the abnormal indeed posits the question of what is normal, but it does not necessarily answer it.

Psychiatry is a part of the science of man; it has a place in it and is a dependent upon it and a contributor to it. It is a part of the science of man because it deals with certain basic and historic problems of man and his society: with thought, emotion, behavior and human relatedness gone wrong. Psychiatry is dependent upon that science, inasmuch as appraisal of the abnormal is necessarily based upon knowledge of what is conceded to be normal, on knowledge of man's intrinsic nature and what makes him function and behave as he does. Psychiatry's contribution comes from the demonstration it makes of certain basic features of the human psyche and their universality.

II

Science builds upon knowledge previously accumulated, not only in its own field, but in encompassing and contiguous areas. All inquiry in a circumscribed area is advantaged by the use of general principles and the data of related sciences. Psychiatry is dependent upon many disciplines concerned with human biology and human behavior. Just as the phenomenon, man, and all that pertains to it is extremely complex, so also is abnormality at the human level. The more abnormality refers to the total human being, as it does in psychiatry, the more necessary it becomes for psychiatry to consider all of the diverse aspects of human nature and human conduct and to examine the knowledge recorded by succeeding generations of thoughtful students of man. We learn today what we may have to unlearn tomorrow and we learn recurrently lessons which were taught before and then forgotten in the changing seasons of science. Today the accumulation of knowledge about man and his behavior is proceeding swiftly along many fronts and from the interpenetration and integration of that knowledge will emerge the new science of man of which we speak. It will be well for us to incorporate into that science the older wisdom and not to neglect it because it speaks of man's eternal preoccupations and so of his future purpose.

Speculative as this all may seem, it is of the greatest importance to us here and now. The organic substrate of the psyche is again a matter of major interest and, if we are not careful, all or part of that vast psychological insight, which Janet, Freud, Jung, Adler and Meyer and their followers gave us, will languish or be minimized. We have already hinted at the dangers of reductionism from the complex phenomena with which we deal to any simple formula. The history of psychiatry which reflects the cultural, as well as the medical, climate of society is testimony to this. Exclusively mentalistic and exclusively biological conceptions have reigned in turn and have contributed in turn to the one-sidedness of psychiatry's preoccupation at various recurring intervals. The pendulum has swung widely—too widely—from one extreme to the other and this has boded ill for our specialty.

Very broadly speaking and with more simplification than is at all justifiable, one may follow three great periods in the history of mental disorder. One is predominantly mentalistic, in the middle ages, when mental disturbances were seen as the outcome of inordinate living or as an index of demonic possession. Yet, mental diseases were certainly recognized as illnesses before that time. William of Paris (Died 1242) noted that physicians did not know enough of diseases of the mind. His voluminous treatise, *De Universo,* includes some peculiar ideas concerning the functions of the brain which stem partly from Aristotle (*i.e.,* the notion of the

brain as a "cooling organ" and of the heart as the seat of mental operation may be found in several of his works), and partly from the latter's Arabian commentators, especially Avicenna. These notions were further developed by Thomas Aquinas in the 13th century, leading logically to the doctrine that certain mental disorders could, or even must, be caused by disturbances of cerebral function. Similar ideas could be traced back even to a follower of Pythagoras, Alcmaeon of Croton, in Southern Italy in the 6th century B. C. It is noteworthy also that in the medical school at Salerno the central role of the nervous system was taught in the 12th century and that they recognized the left-right relationships of the hemispheres and the body. Yet, with all of this, there was a swing to the mentalistic and medicine abjured its responsibility for patients with psychic deviations. There resulted a constant pyramiding of superstition and cruelties that marked much of society's dealing with the mentally ill up to the 19th century.

Although Pinel is justly famous for his humanitarian efforts with the mentally ill and for paving the way for a psychology with strong ethical connotations, he also did something else which was to have major repercussions throughout medicine. In his *Nosographie Philosophique,* published in 1798, he attempted to apply to problems of disease a new method of scientific analysis inspired by the Linnean system of scientific classification, and also by the philosophy of the enlightenment. However, Pinel came under the doubtful influence of such philosophers as Condillac and LeMettrie, the latter himself a physician and the man who coined the term, "man, the machine." This period, with a short interruption during the age of Romanticism, culminated in the formula: *mental diseases are brain diseases.* It was the period of a more or less fantastic brain mythology in which the current psychological conceptions were restated, via arbitrary and superficial analogies, in terms of hypothetical cerebral functions. The moral connotations of psychology went into complete eclipse and the way was open for an investigation of man's mental processes on purely mechanistic levels. Here, indeed, was a wide swing of the pendulum.

Charcot, who had such a decisive influence on the formal development of neurology and neuropathology in the latter 19th century, was also instrumental in pointing the way to psychogenetic concepts in psychiatry. The struggle was bitter in that climate of the time, which considered scientific only the biological approach to man and man's diseases and in which the evolutionary theory was used to explain whole systems of philosophy, psychology and sociology. It was natural and expedient to effect a compromise, if possible, between biological and psychological notions. Freud accomplished this by making psyche and soma two closely related aspects of the living human organism. Instinct is thus rooted in bodily functions and apparatus and also represented in the mind by the image of the situation which would afford instinctual satisfaction, either directly or indirectly. In this way it was possible to view mental states and experiences as causal determinants without relinquishing the idea that everything in man is ultimately organic or somatic. Few authorities took kindly to this compromise, particularly when Freud also tried to show that the psyche has its reasons that reason knows not of, and when his use of the symbol made it possible to extend the range of psychogenesis to bodily symptoms. However, powerful adherents gradually flocked to the psychoanalytic banner and it transpired, in some way contrary to the original spirit of the Freudian doctrine, that exclusive emphasis was placed upon psychogenesis and the somatic aspects of mental disorder were neglected. The pendulum had swung widely again.

We noted earlier that this new psychology brought with it an entirely new view of man's nature. Symptoms were considered expressions of the total personality; inquiry was directed at the hidden purposiveness of neurotic phenomena and the meaningfulness of experience was construed to depend upon the individual, his life history, attitudes and value systems. This emphasis was revolutionary and might have had more ready acceptance had it been kept from the old mold of cause and effect relationships, which followed the laws of thermodynamics presumed to apply to a closed energy system. Like the principle of parity, such a system permitted many successful predictions but that it would need to be tempered became apparent as vari-

ous physical methods of treatment appeared and made possible definite therapeutic progress. Not that the value of psychotherapy was lessened in any way, but it became clear and definite, and we now may regard it as axiomatic that *no one approach to psychiatric disorder can claim a monopoly upon wisdom, understanding or therapeutic efficacy.*

III

It is evident by now that we espouse a comprehensive form of psychiatry and that integration is the watch word in our emphasis. Unfortunately, this term has taken on connotations which are not our consideration here. By integration we mean that all possible aspects of man's make-up and his needs be considered and united with each other in a homogeneous picture. Having discussed the predominantly mental, we should note briefly the activities in the somatic and the social aspects of man's life and what, for want of a better term, we will designate the philosophy of present day existence. This is the material with which, and the field in which the psychiatrist works. As we consider the various activities in the neurological sciences, we see some new formulations which hint at some old ideas.

We do not need to touch upon the new drugs in this discussion, for we can be sure they will receive thorough consideration at this meeting. You all know their attributes and their deficiencies. We can be properly thankful for the appearance of these potent agents, and at the same time hope that in the light of our past experiences we will not be tempted into an era of uncritical pharmaceutical enthusiasm. Perhaps the best antidote against this would be the required reading and rereading of Stewart Wolf's excellent work on Placebos. The description therein of the man who had asthma for 27 years and who responded to the new drug administered under carefully controlled conditions, only to have it later prove to be an inert substance, should furnish the theme for meditation for all those whose chemical titer gets out of bounds.

Likewise, we shall not discuss those substances which have produced psychotic-like experiences in the normal individual. There is hope that out of this work will emerge some new insights.

In the meantime, the biological sciences have also been evolving approaches to a more integrated conception of man. Paralleling the studies of interpersonal relations by psychiatrists, neurophysiologists have studied the communications functions of the nervous system. Some psychiatric and neurophysiological positions purport to see certain analogues between man and the newer machines. This analogy, of course, has decided limitation and recalls to us the difficulties of Pinel's time with the concept, man, the machine. Men are not tools nor parts of a mechanism which functions the better the more appropriate the choice of its constituent elements.

In the area of man's biological needs, neurological experiments over the past decade have demonstrated a mechanism, lying in the internal core of the central nervous system, which is especially concerned in the regulation of biological adjustments. Some parts of this mechanism had previously been exposed by Claude Bernard and by Cannon, Bard, Rioch and others. But this work has been amplified to show osmosensitivity and pharmacosensitivity of the midline periventricular structures. In addition, there has been uncovered by Magoun a diffuse, afferent mechanism sensitive to the total amount of external stimulation—a mechanism involved in regulations of sleep and wakefulness and in the facilitation or inhibition of every sort of organismic activity. It is a mechanism which may well be responsible for the phenomenon observed by Spitz and others, that the amount of total stimulation during early infancy has an important influence on normal development.

There is evidence that the multiple determination of behavior is the outstanding "evolutionary" trend correlated with the development of the forebrain, and especially of the cerebral cortex. Experimental results suggest that the internal portions of the forebrain (the rhinencephalon, some of the basal nuclei and the septal region) have a bearing on motivation of behavior from the standpoint of reward and punishment. Foreseeing the outcomes of actions seems to be intimately bound to the relation between the frontal cortex, the limbic systems and the

hypothalamus. Recent experimental work by Pribram further elaborates fronto-cortical functions, in the sense that frontal lesions seem to affect the relative expectation placed on the desirability (rewarding or punishing aspect) of an action's outcome. Such expectation is determined by many factors apart from the biological "demands" of the organism, including the environmental "supply" of possible outcomes. These findings suggest to Pribram that, in an overall comprehension of man's being, that aspect which concerns man as a communicating organism from both psychiatric and neurophysiological points of view needs to be supplemented by the conception of man as an"economic" being, as one who not only communicates knowledge but is also capable of wisdom—capable, as he puts it, of "equilibrating expectations of the desirability of the outcomes of actions." Thus, at his social best, man is ethical and thus, also, from new experiments come suggestions of old ideas.

We have, therefore, from clinical psychiatry, as well as from experimental and neurophysiological sciences affirmations that the various aspects of human existence and nature interpenetrate each other, for the so-called lower layers are indispensable for the functioning of the higher, and the latter govern to an important degree the operation of the lower echelons. The data of the strictly vital vegetative and sensory functions are elaborated in higher mental operation and the composite influences, and are modified in turn by the social aspects of man and his relationships with his fellows. But none of this is independent from, or immune to what we may call man's higher aspirations, the meaning of his life, his understanding of himself and his place in the order of things. The net result of the evidence we have underscores the need to approach psychological problems from the humanistic point of view which affirms man's spiritual nature.

Meaningfulness of existence is not a by-product of modern science. Science produces no antidote for the trials and tribulations of man in a changing social and industrial order and a rapidly diminishing world. Man is easily upset and thrown off balance when the things on which he habitually relies fail him. The quest for security in modern life is difficult of attainment. For every new security established, another insecurity emerges. Not only does technological development bring its own dangers, but maintenance of security depends on ever closer cooperation and a denser network of social relationships. The more complicated a machinery becomes, the more vulnerable it becomes, and this is certainly true of the machinery of social life, and it is within the bounds of this social life that the psychiatrist works.

Today's society is seemingly dominated by what Riesman calls the "other-directed" man, who finds the motivations of his conduct and the ends he pursues not in himself, but in the dictation of the group. An age of mass production and mass communication gives birth to a mass society, where the individual is as much standardized as are syndicated columns, TV shows and the products of industry. Few dare to be different, and for good reason—for to be different brings them under the condemnation of the group on whose opinion they form their own opinion of themselves. The idolatry of conformity, of being exactly like everyone else in a group which tolerates only "marginal diversity"; the frenzy with which so many people addict themselves to all sorts of superficial activities or passivities—these and other enslavements of contemporary life originate, at least to some extent, from the need to replace beliefs and values and faith in which man once found security. But man's dignity cannot be served in ways that tend to depersonalize him and to deprive his existence of its real meaning. It cannot be served in the "over-adjustment" which is being advocated today, and the attempt to fit all men into a common denominator: the cooperative submitting member of the group.

Sooner or later it dawns on at least some of the people assimilated into modern mass society that their lives are empty of meaning; consequently that they themselves mean little; hence that quiet depression so often encountered in the hearts of men. Though man is conscious, if only in the hidden depths of his being, that he is a unique individual and irreplaceable, modern life makes each individual replaceable and denies his intrinsic and unquenchable need of being himself rather than a mere representative of a uni-

versal type. All one-sided development easily becomes pathological and may be pathogenic. That the more gregarious man becomes, the more he attains to the "good life," is a widely held misconception. Participation in culture is not the same as blindly adjusting to the group and submitting to its tyranny. Nor is the group, as such, necessarily representative of a "cause." On the contrary, we see today a marked aversion of average groups to be engaged in a cause; it is the fringe group, the contentious and litigious, which so often noisily espouses the causes, particularly if they are against something, or if they light up the unconscious hostilities or prejudices of the chronic querulant.

To serve man's dignity means to consider each man's individuality thoroughly and widely. The necessity of viewing man by means of categories of "historical thinking" is as obvious here as it ever was in the development of new approaches to psychiatry in recent years. These new approaches tend to make both the study and practice of psychiatry much more difficult. Psychiatric practice is not just the application of learned technique, no matter how exclusive or inspired it may claim to be. The practice presupposes a sort of human understanding by the psychiatrist. Human understanding is not merely the ability to explain human actions, attitudes, mental states, in terms of some theory which, as such, is necessarily general. All such theories remain somehow on the surface, for they are incapable of grasping precisely what it is that makes a person this one person, distinct from all others.

The spirit of the times—the Zeitgeist, if you will—is a useful concept if one refrains from endowing such a mythical entity with any kind of existence or reality. It is useful only because it expresses the fact that the most different phenomena of an age have something in common, reflect some trend in human life which exercises its influence on everyone's existence. The Zeitgeist, or the general cultural atmosphere in which a person grows up and lives, is as much a part of his environment as are the people who surround him or the conditions under which he works. Psychiatry is finding it rewarding to give consideration to these cultural—in the widest sense, spiritual—conditions, as much as to the factors constituting the social situation of the individual. For the "world" of which the individual is himself a part, and which is at the same time set over and against him, is not the world describable by objective sociological analysis, but the world as he sees it, from his own individual standpoint. It is in many instances of primary importance for the psychiatrist to ascertain to what extent this standpoint is truly that of this one individual, and to what extent it is taken over, unexamined, from the environment and is perhaps inadequate to the needs of the person.

Reluctant though he may be, the psychiatrist in dealing with his patient cannot do much more than to seek some sort of compromise in all this. He must be wary of driving his patient towards an attitude of full realization, for this carries with it the danger of exposing him to the hostility of the group, and he must, on the other hand, help the patient towards a form of life in which he may again feel himself and his existence as meaningful. Ethics and esthetics, so important in the science of man, are therefore important to psychiatry also. Philosophers have often, in the course of history, voiced what the world in general did but darkly sense or did not know at all. But it cannot be predicted that the world will move according to the formulas of the philosophers. The power of well being, comfort, security and passivity is overwhelmingly great; it constitutes the modern siren song.

But what consequences and what directions may be drawn from all this for the future of psychiatry as a science? Though predictions are as uncertain as prescriptions are presumptuous, we must nevertheless attempt to map out some sort of program, or at least to delineate some sort of picture of what is going to happen in our field in the near future. Such an attempt is less risky the more conscious we are of the preliminary nature of all we may say and the more willing we are to modify our plans in the wake of new experience.

Of one point we may be certain: psychiatry will have to be more than ever a medical discipline. The recognition of the causal role of somatic factors, and of the therapeutic

effect of physio-chemical methods, underscores the need for a thorough knowledge of medicine as a prerequisite for doing responsible and successful psychiatric treatment. By the same token, the basic disciplines of psychiatry must be accepted by medicine. Anthropology, social and experimental psychology, the "normal" basic psychiatric science disciplines derive from faculties of philosophy and are not taught in medical schools. Even clinical psychology, an important aspect of psychiatric science, is rarely part of the young psychiatrist's training. As a result, the psychiatrist is handicapped at times when he attempts to think out new methods of approach to disease not already catalogued in his textbook, and the doctor who does not specialize in psychiatry is not adequately equipped to deal with the host of psychiatric problems he encounters in daily practice. The answer to this is as thorough teaching of the basic science disciplines of psychiatry as those of the purely medical sciences.

We may also be fairly certain of another point which, though already discernible, is more of a general vision than a clearly outlined program. We have come to realize that psychiatry, while undoubtedly and strictly a medical discipline, must at the same time be more than this. The psychiatrist in research and in practice is not justified in restricting his endeavors to one aspect of the human being. He has to take account of man as a whole and in the totality of his vital, social, cultural situation. Paradoxical though it may sound, the statement is nonetheless cogent, that to be truly a psychiatrist, one has to be more than a psychiatrist, more than a specialist. As we mentioned above, he must be a humanist. While scientific inquiry and methodology must always form the solid foundation of our discipline, upon this foundation may be erected the edifice of a psychiatry which will be the "applied science of man."

The ideal goal of the psychiatrist is to achieve wisdom, over and above the circumscribed knowledge that science, as it is understood today, affords. Psychiatry could do well with a philosophy of its own. Almost a century has passed since philosophy was formally expelled from psychiatry, but she returns inexorably to remind us that the old problem of the relationship obtaining between mind and body still exists. Philosophy can claim no jurisdiction in matters pertaining to psychiatry and medicine proper. And it would be inappropriate to demand that the psychiatrist be a philosopher in the academic sense. But surely it is legitimate to demand from him an awareness of the fact that the problems in his purview transcend in their ultimate significance the field of purely empirical inquiry and that human existence extends beyond the strictly "natural" into the world of ideas, of truths, of values. The knowledge of man provided by dynamic psychiatry has made it clearer than ever that it is the inner life of the individual which is of paramount importance.

Conclusion

As I close this dissertation, I am aware that I have ranged far afield, with thoughts extending lightly in the clouds; yet all of me is planted solidly with my respected colleagues in the mental hospital, the scene of our labors. Earl Bond spoke feelingly of the necessity of giving the hospital psychiatrist a place in the scheme of things and he asked that all scientific day dreams be checked by the facts which the hospital psychiatrist has in his possession. I feel that my score in that test would not be high and yet it is necessary at times to soar from the hard facts of too many sick people, too little help, too little of everything furnished too late.

I know the futility of asking overworked and fatigued men to look up from their labors in order to see something grand in the overall scheme of things; yet look up we must and, when we do, we can better serve not only the progress of psychiatry, but also the progress of man to a fuller and better life.

If the science of man brings enlightenment to psychiatry, psychiatry can repay this debt amply by keeping in mind the great dignity of man and what human nature really is. The psychiatrist, even more than others, is entitled to make his own the words of the poet, Terence:

"Nil humani a me alienum puto."
(Nothing that concerns a man do I deem alien to me.)

FRANCIS J. BRACELAND, M.D., EIGHTY-THIRD PRESIDENT, 1956–1957: A BIOGRAPHICAL SKETCH

HOWARD P. ROME, M.D.[1]

In a characteristic fashion, Frank Braceland's preface to the 129th Annual Report of the Psychiatrist-in-Chief of the Institute of Living recalled a eulogy given 100 years previously by his distinguished predecessor, a founding member and a president of this Association. Dr. John S. Butler had said of a fellow worker:

> His equanimity and calmness checked the unduly excited; his suavity and quiet dignity calmed the turbulent; his kindness, cheerfulness and wit, with his ready repartee, cheered and amused the desponding, while his rare conversational powers and his fund of anecdote and of general and useful knowledge, made him the welcome companion of all.

As drawn by Dr. Butler the vignette was strikingly, although unintentionally, autobiographical. One hundred years later its author, the pioneer American psychiatrist, whose humane and enlightened care of the mentally ill, Charles Dickens commended as "a great moral lesson," was himself recalled in a similarly inadvertently autobiographical manner by the 83rd president of the Association. Frank Braceland's selection of this century-old tribute exemplifies Fichte's observation: ". . . the sort of a philosophy a man has depends on the sort of man he is."

Then too, the brash observations of youthful peers have a quality of insight which is often as penetrating as it is mordant. The editors of *Clinic*, the yearbook of the 1930 class of the Jefferson Medical College, recalled, among others of the attributes of the "Black Prince," "his resourceful sense of humor" and "his ability to make friends." They recognized with Carlyle that "true humor springs not more from the head than from the heart . . . its essence is love."

Braceland had entered Jefferson from La-Salle College in Philadelphia in 1926. Fifteen years later his alma mater was to give him a doctor of science degree, the first of 4 academic recognitions. The citation with which Canisius College in 1956 conferred upon him the degree of doctor of humane letters echoed the tribute of his classmates, ". . . He is warm, generous, kindly, understanding with a delightful sense of humor and combines all the qualities which we would expect to find in a person who loves his fellow-man. . . ."

The best postulancy for a psychiatrist is the personal experience of sharing with others the vicissitudes of life. Frank Braceland's life is a mosaic of variegated experiences. His father, John J., had died when Frank was 4 years old leaving him and 3 younger children to be raised by their mother, Margaret L'Estrange Braceland, a persevering woman devoted to her family. Happily she lived to see the full maturation of her long years of effort. Frank's collegiate education was the richer because of its late start. He came to academe by a most unlikely route. He was a semiprofessional baseball player, a swimming instructor and an athletic supervisor in a youth center of Philadelphia's "Brewerytown." In his typically laconic fashion he says of this: "I learned the hard way to be multidisciplined." He was too, for there was also a short-lived, sudoriferous career in boxing which has since furnished an inexhaustible store of anecdotes in the wry genre of the neighborhood gymnasium.

His choice of psychiatry at the termination of a chief residency at the Jefferson Medical College Hospital must have been determined in part at least by those alchemical years. His facetious remarks about being multifaceted only thinly veil the versatility his close friends have long appreciated. Despite most tempting offers as a testament to his recognized potentialities in surgery, pediatrics, obstetrics and internal medicine, he was persuaded to seek training in psychiatry by the experience of being a physician-companion to a patient recovering from a profound depression.

For a third generation Philadelphian, Kirkbride's was a natural place to turn to.

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Under the tutelage of Bond, Strecker, Smith, Appel and Palmer, Braceland matured professionally in the intimate preceptor-pupil atmosphere of the Pennsylvania Hospital. From 1932 to 1935, he was an assistant physician at 44th Street—the Department of Mental and Nervous Diseases, Doctor Kirkbride's hospital. In 1935, he went to Europe as a Rockefeller fellow in psychiatry.

At age 35, in the turbulent 1930's, the opportunity to travel and study abroad was a rare one; as Falstaff advised ". . . to be relished with the saltness of time." Dr. Earl Bond had suggested Zurich and Burghölzli. Braceland was an assistant physician there until early 1936: lectures, ward services, the Hochschule and excursions. European study always has been partial to peripateticism and for the pavement-reared Philadelphian this characteristic led to a *wanderjahr* which ran a full continental gamut. How does one assay the value of this kind of experience? The constantly shifting partial pressures of influences, some clearly defined, others vague, still others wholly subliminal, mold the slow change which shapes a life. A walking trip in the Tyrol, a series of discussions with Thomas Mann, Jung's and Adler's lectures, a visit to the colony at Gheel, these and many other catalysts accelerated the fermenting decision to return to Philadelphia.

Braceland, while working as a clinical clerk for Kinnier Wilson, received a cabled invitation from Dr. Bond to return as clinical director of the department of nervous and mental diseases at Pennsylvania Hospital. This invitation crystallized a future. Thereafter Braceland entered into the unique heirarchy of the associate staff of the Institute of the Pennsylvania Hospital. In this setting he served as an apprentice and a journeyman. His private practice-teaching arrangement gave him faculty status as an assistant professor of psychiatry in the Graduate School of Medicine of the University of Pennsylvania and, from 1939 to 1941, as an associate professor at the Women's Medical College.

In late 1941 his teaching and administrative accomplishments led to his becoming dean of the medical school and professor of psychiatry at Loyola University, in Chicago. The advent of World War II precipitated him into another sphere of administrative medical activities to which he was committed, in one or another capacity, until the termination of his active duty with the medical department of the Navy in 1946.

For his wartime service, the decoration of the Legion of Merit was presented to Braceland by the Secretary of the Navy, acting for the President of the United States. The citation that accompanied the decoration acknowledged Braceland's

> Outstanding services . . . as Special Assistant to the Surgeon General . . . as Chief of the Division of Neuropsychiatry . . . for the procurement and training of medical officers and enlisted personnel. . . . His medical knowledge and ability contributed immeasurably to the welfare of the Navy Medical Corps during these critical years.

Since those years Frank Braceland's contributions to various departments of the federal government have been almost too numerous to list. As a member of the Special Medical Advisory Board to the Veterans Administration, he represented both psychiatry and neurology. He performs a similar service as a member of the Armed Services Medical Advisory Board. Since 1953, he has been a member of the Health Resources Advisory Committee of the Office of Defense Mobilization as well as of the National Advising Committee on Selection of Physicians, Dentists and Allied Specialties. Former President Hoover appointed him, in 1953, to membership on the Commission on the Reorganization of the Executive Branch of the Government. He is a consultant to the surgeons general of the Army and of the Navy of the United States and, since 1950, he has been a member of the Advisory Committee to the Department of Defense (Rusk Committee).

The multifacets that comprise the panoramic scope of Braceland's interests and activities seem to increase in number with the years. At the termination of 5 years of active duty in the United States Navy he was asked to establish a section of psychiatry at the Mayo Clinic. During the next 5 years he not only succeeded in doing this but also, as professor of psychiatry in the Graduate School, University of Minnesota (Mayo Foundation), he created a program for fellowship training in psychiatry.

The state of Minnesota expressed its gratitude in the certificate of appreciation its Governor Luther Youngdahl awarded for the herculean task Braceland performed as organizer and chairman of the Governor's Mental Health Advisory Committee. Through his patient and persistent efforts, an archaic program for disenfranchised patients of state mental hospitals was replaced by one which merited the national attention it received.

Frank Braceland has the singular talent of being able to recruit enthusiasm and interest. The facility with which he can invigorate others is matched only by the ease with which he orchestrates their efforts. Walter Lippmann has said, ". . . the final test of a leader is that he leaves behind him in other men the conviction and the will to carry on." The trail of continuing success that Braceland has left meets this test.

The admiration and respect which are commanded by the efficiency and fairness of the examinations of the American Board of Psychiatry and Neurology rest heavily upon Braceland's contributions. As its secretary-treasurer during the 6 years of its most lush growth, and as its president in 1952, he earned the appreciation of many anxious candidates by his kindly efficiency and scrupulous fairness. The advice he gave to candidates (and personally takes) recalls in *double entente* Longfellow's palliative:

Let nothing disturb thee,
Nothing affright thee;
All things are passing.

This is the attitude for which he personally strives. His writings reflect it. It was expressed most lucidly in the delightful reminiscence of 7 years of experience as an officer of the board. The title of the tribulation signified it: "Secretary of the Board: Apologia Pro Vita Sua." In his 1955 chairman's address to the Section on Nervous and Mental Diseases of the American Medical Association, he was careful to explain that his were lesser, purely collateral opinions, subtitled, "Obiter Dicta." The only fitting response to an *apologia* and an *obiter dictum* is the one made by an horatian friend: *multum demissus homo;* freely translated—a real modest guy!

His move to the Institute of Living at Hartford, in 1951, recreated the atmosphere of John Butler's day; in the words Dickens used to describe Butler's supervision, Braceland's work has been "admirably conducted on enlightened principles of conciliation and kindliness." In Connecticut, as in Minnesota, Washington, Illinois and Pennsylvania, he has been active in teaching and all public affairs relating to mental health: Chairman of the State Society Committee on Mental Health of the Connecticut State Medical Society, member of the Medical Advisory Committee of the Veterans Administration Hospital at Newington, member of the Board of Advisors to St. Joseph's College, consultant to Hartford Hospital and St. Francis Hospital, clinical professor of psychiatry at Yale University, living up to the Sophoclean admonition:

A man of worth
In his own household will appear upright
In the state also.

His worth in his own house is attested by his labors for this Association; his membership on the executive and nominating committees, on the coordinating committee on professional standards, on the Isaac Roy award and the Salmon committees—and now the presidency.

Three facets perhaps are more revealing than any of the foregoing: his devotion to his religious faith, to his family and friends and to his books. The award to him of the signal honor of knighthood in the Order of St. Gregory speaks eloquently of his faith and of the recognition of his aspiration by his church. Because he is devout, he is free from that "horrible air of rectitude" which scandalizes as it reminds one of Dylan Thomas' male-nurse so smugly conscious of the radiance of his own nimbus.

To his wife, Hope, and his young children, Faith and Michael, he is affectionately known as a do-it-yourself householder with 10 thumbs proving, as a good teacher should by *argumentum ad demonstrandum,* the innate perversity of inanimate objects. The members of his household see him as an incarnated Johnny Appleseed, whose humus-bedded brood of geraniums promises to dispossess them of their lovely summer home on the bay at Watch Hill. He is a beachcomber by avocation, devoted to fascinating the en-

tire family with his discoveries in the tracks of the ocean's feet along the sands. All the children who know him see his real forte as a prestidigitator able to snatch money out of thin air. With his friends he shares the secret quest for the accolade of the Breton peasant: a private symbolism signifying the uninterrupted opportunity to live and work simply on a commonplace level.

Frank Braceland has a bibliomaniac passion. On his numerous trips about the country his luggage largely is a small bookmobile. As the afflicted indulgently describe it, there is no satiety of the passion for books. With a Jason-like strategy, Braceland fortifies himself against the tasks he is called to perform with periodic browsing in favorite bookstalls in out-of-the-way shops. His major hunger temporarily slaked, he can better sink his teeth into less palatable fare.

His book-piled study in his home, as well as his office in the Institute for Living, completes any picture of him. There, looking down on his desk from all four walls are his books and portraits of his friends.

The quotation from Sherrington with which he closed his presidential message in the December, 1956, JOURNAL expresses his personal credo in the elegant manner he so deeply admires, ". . . we have an inalienable prerogative of responsibility which we cannot devolve, no not as once was thought, even upon the stars. We can share it only with each other."

EFFECT ON BEHAVIOR IN HUMANS WITH THE ADMINISTRATION OF TARAXEIN[1]

ROBERT G. HEATH, M. D.,[2] STEN MARTENS, M. D.,[3] BYRON E. LEACH, PH. D., MATTHEW COHEN, AND CHARLES ANGEL, PH. D.[4]

In this report of work in progress, we describe the effect of the administration of a protein substance, which we have named taraxein,[5] extracted from the serum of schizophrenic patients. Taraxein has been given on 17 occasions to nonpsychotic volunteers and on 1 occasion to a schizophrenic in remission. In all, 20 human subjects have been used in this study. All experiments were designed as double-blind control studies. A variety of nonspecific substances were employed as controls including the protein fraction extracted from serum of normals by the same procedure as that used to obtain taraxein from schizophrenic serum (5 occasions); another protein fraction, ceruloplasmin, obtained from normal serum (3 occasions); known inactive solutions of taraxein (2 occasions); normal saline (2 occasions); and a weak solution of sodium amytal (1 occasion). Nonspecific control injections were given on 13 occasions. Four of the subjects received nonspecific substances exclusively, 2 of the 4 receiving nonspecific substances on two occasions. Four subjects received active taraxein on one occasion and an inert substance on a second occasion; 1 individual received 2 inert substances plus 1 active substance; another subject, active taraxein on two occasions and an inert substance as a third injection; 2 subjects, active substance on two occasions. When more than 1 substance was given to 1 subject, the subsequent injections were always given on the same day (Table 1).

In our previous preliminary report on the clinical aspects of this work(1), we described the effect of the administration of taraxein to 2 human volunteers, 1 of whom also received 2 inert fractions as a control; and our first observations of the effect of taraxein with its administration on 30 occasions to 11 monkeys with chronically implanted cortical and subcortical electrodes. To date we have administered the taraxein on 53 occasions to 20 monkeys with the chronically implanted electrodes. Many dif-

TABLE 1

NUMBER AND NATURE OF INJECTIONS GIVEN TO THE 20 VOLUNTEER SUBJECTS

Experimental group no.	Subject no.	Active taraxein	Inactivated taraxein	Normal B fraction	Cerulo-plasmin	Normal saline	Sodium amytal
I	1	1	—	—	—	—	—
	2	1	2	—	—	—	—
II	3	1	—	—	—	—	—
	4	1	—	—	—	—	—
	5	—	—	—	—	1	—
	6	1	—	1	—	—	—
	7	1	—	—	—	—	—
III	8	1	—	—	—	—	—
	9	1	—	—	—	—	—
	10	1	—	—	—	—	—
IV	11	1	—	1	—	—	—
	12	1	—	1	—	—	—
	13	—	—	—	1	—	—
	14	1	—	—	—	—	—
	15	—	—	1	1	—	—
	16	1	—	—	1	—	—
V	17	2	—	1	—	—	—
	18	—	—	—	—	1	1
	19	2	—	—	—	—	—
	20	1	—	—	—	—	—
	—	—	—	—	—	—	—
Totals.	20	18	2	5	3	2	1

[1] Presented at Divisional Meeting of The American Psychiatric Association, Montreal, Canada, November 9, 1956. Illustrated with 16 mm. sound motion picture films. Supported by grant-in-aid from The Commonwealth Fund.

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[3] Special Foreign Fellow, The Commonwealth Fund.

[4] Authors wish to express appreciation to Warden Maurice H. Sigler, Louisiana State Penitentiary, Angola, Pa., for making arrangements to conduct the experiments with human volunteers; to all those inmates of the penitentiary who volunteered for the experiments; to N. F. Otillio and William H. Miller for technical assistance; and to Irene Dempesy for help in correlating data and for secretarial assistance.

[5] Taraxein from the Greek *taraxis* meaning confusion, or disorder of the mind.

ferent fractions have been tested in monkeys to control the study. Although we now possess considerably more information than at the time of our preliminary report, there is much information which we would like to possess but have not yet been able to gather. In this progress report we present the additional data on our clinical studies, being fully aware that much remains to be learned, but hoping that others will become interested in broadening the studies.

Factors leading up to the isolation of this blood fraction were briefly reviewed in the presentation at the APA meeting in Chicago, 1956(1). For several years we had obtained subcortical and cortical recordings from a group of schizophrenic patients(2, 3) which revealed a characteristic spike and slow wave pattern in the septal region and rostral hippocampus (Fig. 1B). Accumulated evidence indicated that the introduction of physiological variables to this region produced profound changes in blood chemistry. This led to the exploration of the comparative effects of schizophrenic and normal serum on the speed of adrenaline oxidation. Our findings suggested that adrenaline was more rapidly oxidized by the serum of schizophrenics who were free of systemic disease than in normal control subjects(4). Similarly, we(5) found in confirmation of Altschule's work(6) that levels of reduced glutathione were lower in a statistically significant number of schizophrenics without systemic disease than in normal control subjects. Both indicators, *i.e.* the speed of adrenaline oxidation and the low glutathione levels, were, however, nonspecific since nonpsychotic persons with various systemic diseases showed similar alterations. It was known from work of others(7, 8) that copper levels were increased in chronic disease processes and in schizophrenia, and that in diseases other than schizophrenia, the elevated copper levels were due to increased levels of the copper globulin oxidase, ceruloplasmin. In investigating the adrenaline oxidation phenomenon, we noted that the addition of copper speeded the process considerably. In one study we isolated ceruloplasmin from serum and found that this was the substance in serum responsible for the increased oxidation. Details of this study including the isolation of one inhibitor of the process (albumin) are given in a separate article(9). Recent evidence suggests the

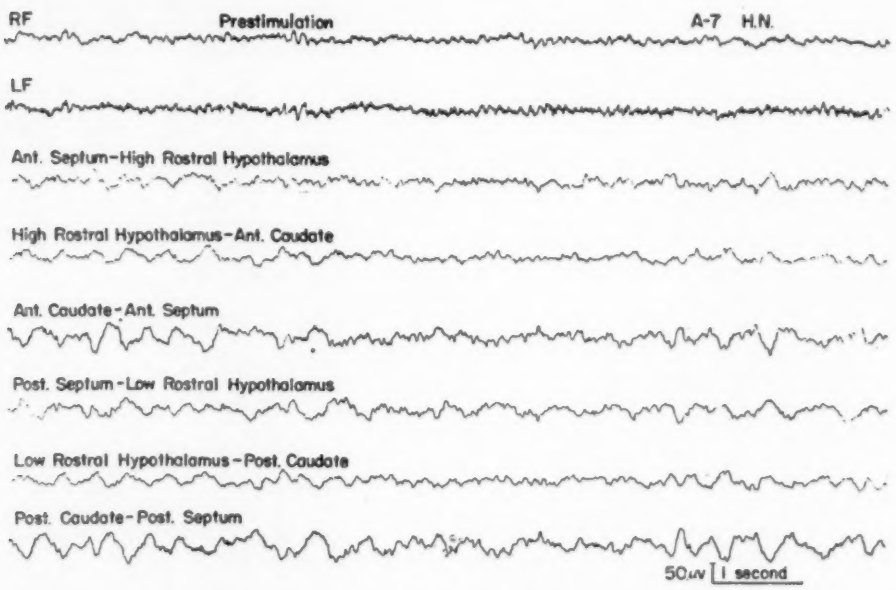

FIG. 1A.—Scalp and subcortical recordings in a nonpsychotic human subject (intractable pain).

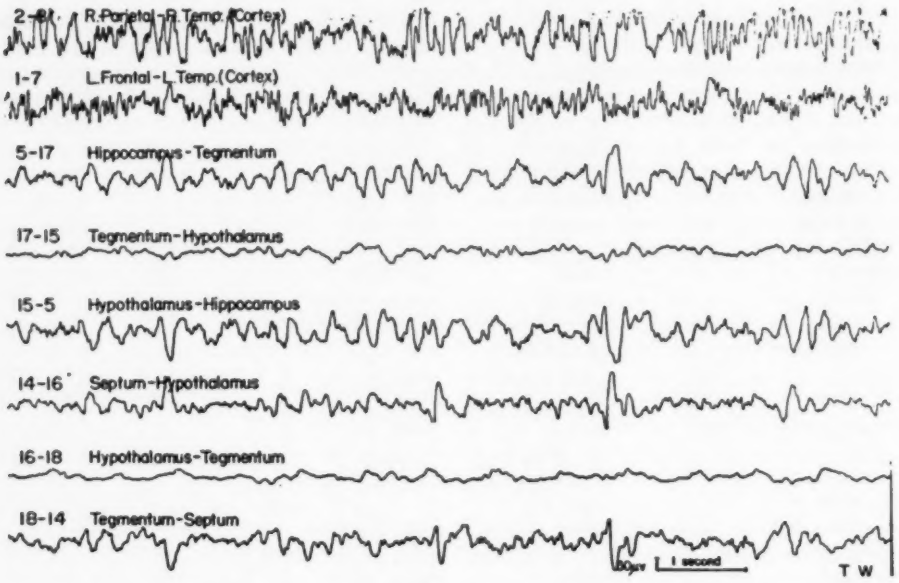

FIG. 1B.—Cortical and subcortical recordings in a schizophrenic patient.

presence of additional inhibitors. Inasmuch as patients with schizophrenia showed the increased speed of oxidation of adrenaline and lowered levels of reduced glutathione in the absence of systemic diseases, we postulated that perhaps a copper protein accounting for these differences might be qualitatively different if this chemical phenomenon, namely increased levels of oxidizing enzymes, was an important factor in psychotic behavior. To test this hypothesis we isolated ceruloplasmin from the serum of normals and schizophrenics and administered it to monkeys with chronically implanted electrodes. With the intravenous administration of ceruloplasmin from schizophrenic patients, the monkeys occasionally showed mild behavioral changes characterized by reduction in level of awareness resembling incipient catatonic symptoms. This did not occur with the administration of the substance extracted from normals. It was noted during the extraction procedure, however, that at one point in the process—namely when the euglobulins were precipitated out by lowering the pH to 6.2—a blue color was present in the precipitate from schizophrenic serum but not in the precipitate from normal serum. Since we had these mild behavioral changes with administration of schizophrenic ceruloplasmin, we postulated that perhaps this apparently different precipitate might be significant. Therefore, instead of discarding it, as is routinely done in the extraction of ceruloplasmin, we set up a procedure for processing this substance. When the end-product of this procedure was administered to the monkeys, most profound behavioral changes resulted; the behavior resembling very closely that seen in schizophrenic patients. The monkeys appeared dazed and out of contact. They were catatonic and the extremities could be readily molded into various positions. In association with this, there were clear-cut alterations in the electrical recordings (Fig. 2), particularly from the septal region. Since we had accumulated considerable data on recordings from human schizophrenics which showed essentially the same characteristics, we reasoned that if our recordings in schizophrenics were significant, then administration of this substance should induce schizophrenic-like behavior in the humans (we could not reasonably call the monkeys' behavior schizophrenic since this diagnosis is

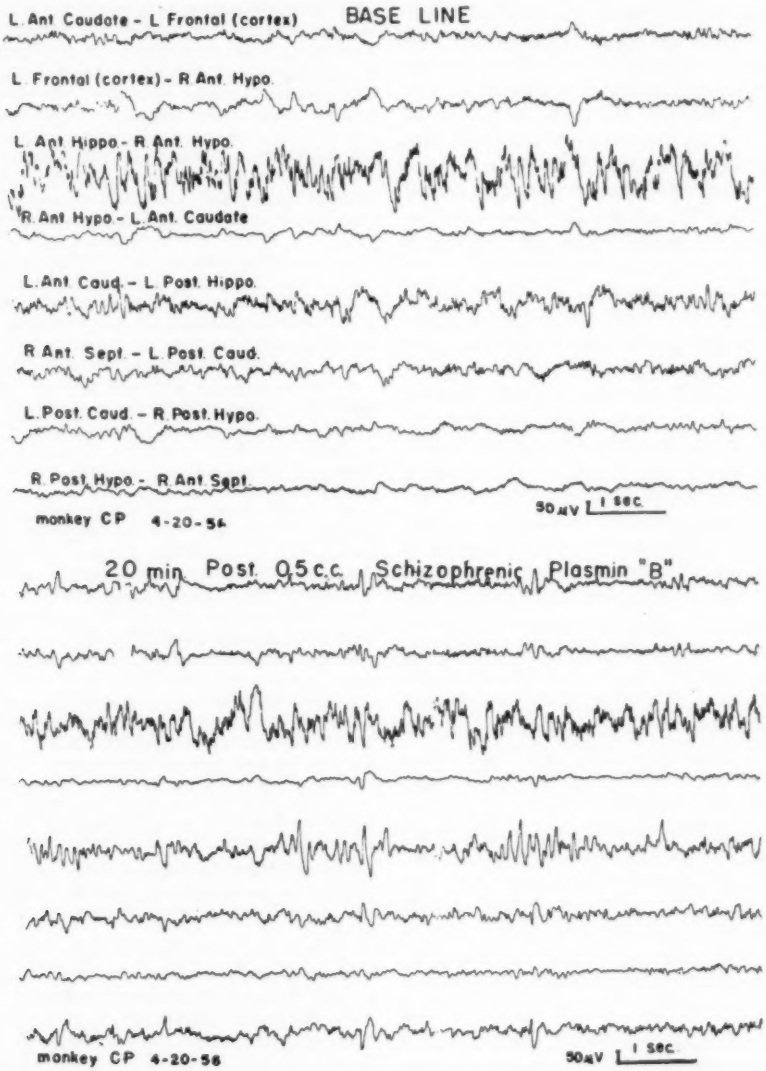

FIG. 2.—Subcortical and cortical recordings in monkey before and after administration of taraxein.

dependent upon the reporting of the patient). In this regard, our previous data on electrical recordings from humans were of extreme importance since we would otherwise have had no logical reasons for assuming that the behavioral reactions we observed in monkeys were anything more than simple toxic effects which many compounds are capable of producing. Other compounds which altered behavior in monkeys have never produced this characteristic type of recording. Thus, by means of the electrical recording, we are apparently able to make meaningful cross-interpretations of behavior from animals to man.

MATERIAL AND METHODS

Schizophrenic patients, from whom blood was drawn for the experiments described, were selected from 4 local psychiatric hospi-

tals. Two were large hospitals for chronic care and 2 were acute treatment centers. All donors were physically well but showed clear-cut schizophrenic symptoms. They were not receiving physical treatment or drug therapy at the time, the drugs having been discontinued at least 3 days before blood was drawn. Diets in the 4 hospitals varied considerably. The patient group varied considerably in age and duration of hospitalization.

In all experiments thus far, the taraxein has been extracted from serum pooled from several patients. This has been necessary since the amount of taraxein needed to create a reaction in the host requires a minimum of 400 ml. of serum, or approximately 900 ml. of blood. For some experiments the pooled serum from the various classical subcategories (catatonic, hebephrenic, paranoid and undifferentiated) were pooled and processed separately. When serum was pooled according to diagnostic subcategories of schizophrenia, the donors were reexamined to check diagnosis. In most instances, 250 ml. of blood were drawn from each patient, using the standard Cutter Laboratory blood drawing sets. The serum was immediately separated from the blood cells, cooled and then transported to the medical school laboratories for processing. The fractionation process usually required 5 days.

In this experiment, the method employed to extract taraxein is a modification of the Holmberg and Laurel technique for isolating ceruloplasmin(10). The procedure which follows is for the processing of 400 ml. of schizophrenic serum (for control studies, similar quantities of serum from normal subjects are used).

1. Approximately 1,000 ml. blood obtained from schizophrenic patients is allowed to clot (2 to 3 hours) and is then centrifuged at 2,500 RPM for 20 minutes at 10° C. Usually 250 ml. from each of 4 patients is pooled.

2. Serum is separated from the clot by suction and is then cooled to 4° C. and divided into four 100 ml. portions.

3. To 1 volume of serum, 1.2 volumes of saturated ammonium sulfate (4° C.) is added while stirring. This mixture is then centrifuged for 3 hours at 4° C. at 2,700 RPM.

4. The supernatant is decanted and discarded. If the residue is not packed well, only as much supernatant is poured off as is possible without losing appreciable quantities of the residue.

5. The residue from each of the 100 ml. portions is then dissolved in 100 ml. of cold tap water (10° C.) and these solutions are then pooled and transferred to 1¼" dialysis tubing for dialysis for 40 hours against cold tap water (10° to 15° C.). Our tap water varies in pH between 9.8 and 10.2.

6. The dialyzed material, which usually has a volume equal to about twice the original serum volume, is removed from dialysis and is allowed to stand at room temperature until it warms to 16° C. The pH at this stage is usually between 9.3 and 10.2.

7. The pH is adjusted to 6.6 with 0.4% acetic acid. The acetic acid is added dropwise from a burette with constant stirring. The pH adjustment at this stage normally requires 8 to 12 ml. of 0.4% acetic acid per 100 ml. of serum originally used (32 to 48 ml. for the 400 ml. batch).

8. The suspension with pH adjusted to 6.6 is centrifuged at 2,700 RPM for 20 minutes at 18° C.

9. The residue is solidly packed and glossy and is usually green to greenish-yellow. (The supernatant is poured off and retained to be further processed for ceruloplasmin.)

10. The 6.6 precipitate is suspended in a small volume of cold (10° C.) tap water by thorough mixing with a glass rod. Then sufficient cold tap water (10° C.) is added to make the volume equal to one-half the original serum volume, *i.e.* 200 ml.

11. This suspension is then transferred to 1¼" dialysis tubing and dialyzed 10 to 11 hours against cold tap water (10° to 15° C.). This dialysis causes very little change in volume.

12. After removal from dialysis the material is allowed to stand at room temperature until it reaches 16° C. At this point the pH is usually between 8.0 and 10.0. Distilled water equal to the volume of the dialysate is then added.

13. The pH is then adjusted to 6.8 by the dropwise addition of 0.4% acetic acid while stirring continuously with a glass rod. The pH adjustment at this point usually requires between 0.5 ml. and 1.0 ml. of the 0.4% acetic acid for each original 100 ml. of serum, or 2 ml. to 4 ml. for the 400 ml. batch.

14. The volume is measured at this point and is approximately the original serum volume, *i.e.* 400 ml. The suspension is then cooled to between 3° C. and 1° C. in an ice bath.

15. An equal volume of chloroform-alcohol mixture (one part chloroform to 9 parts of 90% ethanol) which has been pre-cooled to between −12° to −25° C. is then added to the chilled suspension with continuous stirring. The temperature of the mixture at this point goes up immediately to between 5° and 11° C.

16. The mixture is then allowed to stand at room temperature for 3 hours.

17. This is centrifuged at 2,700 RPM for 30 minutes at 18° C.

18. The supernatant fluid is discarded and if a layer of chloroform collects below the solid residue, it is also discarded.

19. The residue is then mixed with 0.86% sodium chloride solution using 25 ml. for each 100 ml.

of serum originally used or 100 ml. for the batch. This mixture is dialyzed for 18 hours against running tap water.

20. The dialysate is then dialyzed for 15 hours at 4° C. against 1,200 ml. of 0.86% sodium chloride solution (300 ml. for each 100 ml. of original serum) the pH of which is 9.0.

21. This material is then centrifuged for 15 minutes at 4° C. and 3,000 RPM.

22. The volume of supernatant is then measured and 1.85 volumes of cold saturated (4° C.) ammonium sulfate is added and mixed.

23. The material is then centrifuged for 1 hour at 4° C. and 2,500 RPM.

24. The supernatant fluid is discarded and the residue is drained as completely as possible.

25. The inside walls of the centrifuge bottles are wiped with tissue to remove excess ammonium sulfate solution.

26. The residue is suspended in saline (0.86%) using 1 ml. for each 400 ml. of serum originally used. This suspension is transferred to a dialysis tube (¾") and the centrifuge bottle is then rinsed twice using an additional ½ ml. of saline each time, and this also is added to the dialysis tube.

27. The material is then dialyzed 4.0 hours against cold running tap water.

28. After removal dialysis the material is centrifuged 15 minutes at 2,500 RPM at 18° C.

29. The supernatant solution which usually has a volume of 2 to 3 ml. for each 400 ml. of serum may be retained at 4° C. for several hours (4 or 5) and still have activity or it may be quick-frozen in a thin walled container using liquid nitrogen. In the event that it is necessary to quick-freeze with dry ice and alcohol, the material should be in a sealed container so that it is not exposed to carbon dioxide.

This method has been slowly improved since we were first able to extract taraxein from the serum of schizophrenic patients. We expect to be able to improve the method further as we gain further understanding of the characteristics of taraxein. Through modifying the procedure over the course of the last year, we have become aware of a number of factors that will inactivate the substance. Currently, other techniques of extraction are being investigated. A detailed report of these findings will be forthcoming in another publication as we learn more of the identification of this fraction.

At present, even when all known factors considered in the outline of method are closely controlled, we do not always obtain consistent activity in the taraxein fraction. We do not have a method for accurately quantitating the amount of taraxein in our preparations. Our only method for determining the presence or absence of activity is with animal assay (1). It has been our practice to administer intravenously to the monkeys the amount of substance we are able to obtain from 400 ml. of schizophrenic serum. If marked behavioral and EEG changes occur in the Rhesus monkeys, we consider the preparation to have maximal activity. If the taraxein from this amount of schizophrenic serum produces no observable behavioral or EEG changes in the animals, we consider the preparation inactive even though the test actually indicates that we have not reached threshold dose for this animal. The taraxein given to the human subjects in this experiment was rapidly administered intravenously. The actual amount of fluid administered was 1 to 3 ml. This was the quantity derived from 400 ml. of serum.

The experiments with human subjects are divided into 5 groups. Each of the 5 was designed to answer one or more specific questions. Although they have provided us with considerable information, several important questions remain unanswered. Further experiments are planned to gain needed additional information.

In obtaining volunteers, groups of prisoners in the cell blocks were first called together and the nature of the proposed experiments described. Those interested were then asked to sign a release form which detailed all known information concerning the project, released Tulane University and State authorities from responsibility, and clearly stated that no reward could be provided for this service. The first step in screening was to eliminate all persons with a history even vaguely resembling a psychotic state in themselves or any member of the family. Potential subjects were then taken to the prison hospital where a careful screening interview was conducted with each candidate by at least 2 psychiatrists. A minimum of a seventh grade education was required. All of the prisoner volunteers fell into the diagnostic category of psychopathic personality since they displayed extractional behavioral trends to varying degrees. In each subject, evaluation of the motivation for the anti-social act for which they were imprisoned was a primary consideration. A careful appraisal of underlying dynamic character traits was attempted with the consideration that it might

be of some value in predicting the type of reaction they might show after the administration of the taraxein. There are 3 nonprisoner subjects in the series, all of whom received taraxein. One is a laboratory technician in our department and well known to us. The second manifested a low average intellectual level but no evidence of psychotic symptoms. The third was a known paranoid schizophrenic. He had been under treatment for some time and was in a state of remission in that his secondary symptoms of overt persecutory delusions and referential ideas with auditory hallucinations had subsided. Detailed reports of mental status examinations and histories on all subjects are available, but too lengthy to be included here.

The experimental design for each group and the questions to be answered by each were as follows (Table 1):

Group I.—This experiment, which included 2 subjects, was designed to answer the major question as to whether or not administration of the blood substance from schizophrenics which produced characteristic behavioral and subcorticogram changes in monkeys would result in shizophrenic-like behavior in humans. In contrast to the monkeys, the humans could report their thoughts and feelings, thus providing the data necessary to compare these reactions with behavioral changes seen in schizophrenic patients. Each of the subjects received 1 injection of active taraxein from pooled schizophrenic serum and 1 of the subjects first received 2 injections of an inert substance as a control.

Group II.—This experiment included 5 subjects and was designed to provide a larger and more thorough study with more controls. Each subject was examined by 4 psychiatrists. Psychological testing was conducted before, during, and at conclusion of the reaction. Very active substance was given to 2 subjects; normal saline to the third; the protein fraction obtained by the same procedure from normal serum was administered to the fourth subject; the fifth volunteer received a weak taraxein injection. The subject receiving the fraction from normals was later given a weak solution of taraxein. The weaker solutions provided information regarding dosage levels. In this experiment, pooled serum subdivided according to the conventional subcategories of schizophrenia was employed.

Group III.—This was a heterogeneous group and included the 3 nonprisoner volunteers. Our motivation in administering taraxein to a schizophrenic in remission was to determine if there would be a difference in reaction from that seen in nonpsychotic subjects. Our reasoning was that we might obtain some leads as to possible underlying mechanisms in the phenomenon. Inclusion of the 2 additional subjects served to determine if residency in a state prison was prerequisite for the reaction.

Group IV.—This group included 6 subjects. Four were given taraxein. In addition, 6 injections of control substances were made, 3 of which consisted of the protein extracted by the taraxein isolation method from serum of normals and 3 were of the ceruloplasmin fraction from normal serum. As is apparent, some of the subjects received 2 injections, either 1 of taraxein and 1 of the substance similarly extracted from normal serum or 2 injections of different normal fractions (1 subject). In this experiment we selected as volunteers only first offenders who had minimal prison sentences in an attempt to obtain a prisoner group with the least degree of psychopathy. Also in this experiment, pooled serum subdivided according to the conventional diagnostic subcategories of schizophrenia was employed. Our purpose in doing this was to determine if the taraxein extracted from serum of patients with one particular subcategory of schizophrenia would, when injected, induce similar symptoms in the recipient.

Group V.—Two of the 4 subjects of this group received 2 injections at least 3½ hours apart; a third subject, 3 injections each separated by at least 3½ hours; a fourth subject recevied only 1 injection—a total of 8 injections: 5 of active taraxein; 1, the fraction extracted from normal serum; 1 of normal saline; 1, a weak solution of sodium amytal. All injections contained the same volume of fluid and were purposely made to be of exactly the same color. This experiment was designed to determine whether or not the same individual would react differently upon receiving taraxein of one sub-

category of schizophrenia than he would when receiving taraxein of another subcategory.

On all experiments, moving picture films were taken before and at various periods following the administration of the compounds.

RESULTS

All patients receiving taraxein developed symptoms which have been described for schizophrenia. This does not imply that each time we have processed taraxein, especially in the earlier stages, we obtained an active product. It has been our policy always to test at least 1 dose of each preparation on monkeys prior to setting up a study with human volunteers. The details of information we have gathered concerning the factors in processing which might inactivate this substance will be given in our paper on identification. With the exception of a few early occasions, we have always processed blood from normals along with that of the schizophrenics, usually isolating the ceruloplasmin as well as the fraction that comes out by the extraction method for taraxein. In monkeys we have given the fraction extracted from normal serum by the taraxein isolation method on 10 occasions to 7 monkeys without producing behavioral or EEG changes. In the 5 human subjects to whom this fraction obtained from normal serum was administered as a control, we induced no reaction. Likewise, in the 3 normal subjects we received ceruloplasmin extracted from normal serum, there was no reaction. There is, however, one questionable situation in regard to the administration of the protein fraction from normals which is detailed below under Complications. In none of the other control experiments which included 2 doses of known inactivated taraxein and, on 3 occasions the administration of saline, or Sodium Amytal, has there been any behavioral change.

Some rather consistent basic alterations in behavior have occurred in every subject receiving taraxein. This is in contrast to rather marked variability in secondary symptoms which have appeared. Basic alterations are similar to those described by Bleuler(11) as "fundamental symptoms." Secondary symptoms resemble Bleuler's "accessory symptoms." The onset of symptoms is gradual beginning in every instance between 2 and 10 minutes following the injection. Symptoms increased slowly in intensity reaching a peak between 15 minutes and 40 minutes, after which they begin to subside. The longest duration of clinically detectable symptomatology in the nonpsychotic population has been 2 hours. No residual abnormalities have ever been observed beyond this period except in the case of the 1 schizophrenic patient.

GENERAL REACTIONS

The characteristic general change is evidence of impairment of the central integrative process resulting in a variety of symptoms. There is marked blocking with disorganization and fragmentation of thought. There is impairment of concentration. Each subject has described this in his own words—some saying merely "I can't think"; "my thoughts break off"; others, "I have a thought but I lose it before I can tell you anything about it," etc. "My mind is a blank" is another common expression. It becomes impossible to express a complete thought. Often they will state only a part of a sentence. They appear generally dazed and out of contact with a rather blank look in their eyes. They become autistic, displaying a lessening of animation in facial expression. Subjective complaints of depersonalization are frequent. Attention span is markedly shortened with increase in reaction time. The symptoms often produce apprehension in the patients. The commonest verbalization of their concern is "I never felt like this in my life before." Virtually all have made this statement. Memory was impaired only during states of profound stupor. Recall was excellent in all cases except for what transpired during periods of deep stupor. Sensorium has always been clear when subjects are capable of reporting.

SPECIFIC REACTIONS

The test subjects have developed secondary symptoms of various types and degrees. In an effort to gain some knowledge as to whether or not the subcategories of schizophrenia represented different diseases, we

have carried out a variety of studies with the various test groups.

In the first test group of 2 subjects, 1 batch of taraxein was extracted from pooled serum of schizophrenics of various subtypes. Each subject received one-half the material and the secondary symptoms in one were predominantly catatonic whereas in the other they were predominantly paranoid.

In 3 of the test groups, II, IV, and V, taraxein was extracted from schizophrenic serum which was pooled in accordance with the classical subcategories, *i.e.* paranoid, catatonic, hebephrenic, and undifferentiated. There has been no consistent correlation between the presenting symptoms of the donors and those of the recipients with regard to secondary symptoms. On one or more occasions, symptoms characteristic of all the schizophrenic subcategories have been induced. Thirteen subjects in these 3 test groups received taraxein extracted from serum pooled according to subcategories. On 4 occasions, the recipient presented predominantly the symptomatology of the donor group, whereas on 9 occasions, predominant symptoms of the recipient fitted into schizophrenic subcategories other than those presented by the donor group.

After our experience with the first 2 prisoner volunteers, we were interested in determining if, on the basis of mental status examination, we could accurately predict the type of secondary symptoms that would be induced by the administration of taraxein. As indicated in our preliminary presentation, our predictions were not accurate. In Groups II, IV, and V, all examiners independently listed their predictions prior to the administration of the substance. Although there was almost universal agreement among the examiners, the reactions in the subjects were not at all in accordance with the predictions —in fact, the predictions were wrong in the majority of cases. It must be pointed out, however, that the predictions of the examiners were based on only one interview. It is possible that longer observation may have resulted in more accurate predictions, but this does not seem likely since the character traits in the group were quite distinct.

On 2 occasions (Group V), a single subject was given 2 test doses of taraxein extracted from patients with different types of schizophrenia. In 1 instance a subject first received taraxein from paranoid patients and developed some paranoid symptoms; namely, referential ideas, suspicion and auditory hallucinations. Later, after all effects had cleared, he was given taraxein from patients with undifferentiated schizophrenia which induced predominantly catatonic symptoms. The other subject, receiving 2 injections, first received taraxein from undifferentiated schizophrenics and developed a mild undifferentiated schizophrenic reaction with predominantly primary symptoms. His second injection of taraxein, after all symptoms had cleared, was from catatonic patients. This induced full-blown catatonic symptoms. It may be an important observation that the symptoms were much more intense in both individuals following the second injection.

In test Group IV in which all subjects were first offenders and whose history of antisocial behavior was shorter, the reactions were the same. Two subjects in Group V were also first offenders. Reactions were in no way different from those induced in more chronic offenders. In the 2 nonschizophrenic volunteers of test Group III, the induced reactions were again essentially the same. These observations indicate that the effect of taraxein on inducing schizophrenic symptoms is not related to intensity of psychopathic behavior nor to residency in state prisons.

The response in the 1 schizophrenic patient in remission who received taraxein was quite different from that seen in the nonpsychotic volunteers. We know of no way to evaluate accurately intensity of reaction once full-blown secondary symptoms appear, but the symptoms induced were quite marked and were characterized by more profound depersonalization than those seen in the nonpsychotic volunteer group. The principal differing characteristic, however, was the duration of reaction. The full-blown open psychotic symptoms induced persisted to a gradually diminishing extent for 4 days, in contrast with the maximum duration of 2 hours in the nonpsychotic volunteers.

Psychological tests given some of our taraxein subjects by H. E. King have shown clearly a defect in performance roughly ap-

proximating the dosage administered and the observed clinical effects.

COMPLICATIONS

In these clinical studies we have had two noteworthy complications. On 3 of the 18 occasions when taraxein was administered to humans, the subjects developed nausea and 1 subject vomited. These effects persisted for less than 5 minutes following the injection and prior to the onset of the psychotic symptoms. All occurred in the earlier experiments. We believe that they were caused by insufficient destruction of nonspecific proteins at one stage of the processing. With a minor modification of the processing, they have been eliminated.

Another serious complication occurred when one subject, receiving a fraction labelled as coming from serum of normals, developed a full-blown psychotic reaction. Though it appears that this was a case of mislabelling, we believe it necessary to report it along with all evidence surrounding the incident. The tubes were labelled by the chemists at 6:00 a.m. after they had worked on the procedure throughout the previous night without sleep. This fraction was processed along with several batches of schizophrenic serum. One batch of schizophrenic serum consisted of 2 doses of undifferentiated schizophrenic serum. One dose of the fraction labelled undifferentiated was active and produced psychotic symptoms in a human subject. When we administered the second dose labelled "undifferentiated" (other half of the total amount) to the same subject who developed a full-blown reaction from the fraction labelled "normal," it produced absolutely no response. We thought that if one dose consisting of one-half of the match of undifferentiated taraxein was active, then this second dose consisting of the other half of the same batch should have been also. On the basis of these factors, we strongly suspect that one dose of normal and one dose of undifferentiated schizophrenic fraction were mislabelled. In addition to this, we have administered the fraction extracted from normals to 5 other human subjects and 10 monkeys with no effect whatsoever. Despite this evidence, however, we recognize that because of this complication we must test many more normal fractions before being absolutely certain that the effects cannot be induced by administration of the fraction from normals.

Discussion

It is obvious that although we have accumulated considerable data there are still many unanswered questions. At this stage we feel it would be unwise to attempt to draw any sweeping conclusions or to enter into lengthy theoretical speculation. Our data tentatively suggest that schizophrenia, despite the nature of presenting symptomatology, may be one common disease entity. Several other factors seem apparent. One is that different test subjects have different thresholds for the appearance of psychotic symptoms with the administration of this substance. This is based on the observation that similar amounts from the same batch produce varying intensity of symptoms in different subjects. Also, duration of effects following the reaction vary considerably suggesting a different speed of breakdown of the substance. Although cognizant of the danger of speculating on the basis of one case, the results in our one schizophrenic subject suggest that in schizophrenic persons, the ability to detoxify this substance or a product formed by the interaction of this substance with some constituent of the human organism is impaired.

We have gained the impression, although it is difficult to substantiate, that the nature of the presenting symptoms is a function of dosage rather than of the recipient's character traits or the disease symptoms presented by the donor. So-called primary or fundamental symptoms have appeared with lower dosages whereas hebephrenic and catatonic symptoms predominate with high dosages. Supporting evidence for this speculation is the observation that a more intense color is usually noted in the precipitated fraction from catatonic and hebephrenic donors. Of course this observation is highly speculative since we as yet do not have a method for accurately quantitating the amount of taraxein present. Several questions have been raised concerning the similarities between reactions in subjects receiving this substance and those in volunteers receiving

the psychomimetic drugs, D-lysergic acid and mescaline. The principal difference is that subjects in this study have presented the characteristic picture of schizophrenia whereas those receiving the conventional psychomimetic drugs had only some schizophrenic symptoms and the most prevalent were typical of toxic psychosis (visual disturbances, disturbances of perception and sensorium, etc.). Our subjects have never shown symptoms of autonomic nervous system stimulation so characteristic of D-lysergic acid reactions.

We considered the possibility that an immune reaction might develop from taraxein which perhaps would render the subject insensitive to later injections. We therefore repeated the experiment after an interval of 11 weeks in one subject. Response to the second injection was virtually the same as to the first.

In our preliminary paper we reported that we had extracted taraxein from the blood of so-called pseudoneurotic or ambulatory schizophrenics. These were patients in our outpatient department who presented some fundamental or primary schizophrenic symptoms without secondary or accessory symptoms. We noted, however, that in order to produce a reaction in monkeys, taraxein from a larger amount of serum was required. As yet we have been unable to explore this area further, but hope to report on it in the near future.

Summary

Work in progress centered about the isolation of taraxein from the serum of schizophrenic patients and its administration to monkeys and human volunteers is presented. The taraxein was extracted from a variety of schizophrenic patients in 4 institutions and administered on 17 occasions to nonpsychotic human volunteers and on one occasion to a schizophrenic patient in remission. Several additional studies are planned or in progress and we expect that in the near future it will be possible to present considerably more information.

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THE EFFECT OF CULTURE CHANGE ON THE NEGRO RACE IN VIRGINIA, AS INDICATED BY A STUDY OF STATE HOSPITAL ADMISSIONS [1]

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Norman Cameron in his textbook *Behavior Pathology* describes desocialization as one of the abnormal reactions found among the mentally sick. He designates two causes, namely isolation, a voluntary action, and segregation, a separation from the group by group action(1). Since the Negro in Virginia had been segregated for years, it was decided to compare the mental hospital statistics for the white and the Negro in Virginia to see if there was any evidence in the state hospital population to substantiate Cameron's statement regarding the effect of segregation.

Virginia was a convenient state for such a comparison, because the Central state hospital, Petersburg, had admitted all the Negro patients committed in the state, and the other 3 state hospitals had admitted all white patients committed, regardless of overcrowding that might exist. This policy regarding admissions has been pursued for at least 50 years. Also the department of mental hygiene and hospitals of the State of Virginia, under the direction of Dr. Joseph Barrett, had established an admirable statistical department under the direction of Edna Lantz. The very efficient cooperation of Miss Lantz, a co-author of this paper, made the study possible.

The first study is shown in Table 1. Here the number of patients in the state hospitals is shown and compared to the white and Negro population. The rate per 100,000 shows 2 outstanding features; first, that the Negro ratio has always been greater than the white and second, that while the white ratio increased by 113 points, the Negro ratio increased by 343.6. The ratio per 100,000 Negro population has more than doubled in the 40 years.

There are so many reasons why patients stay in hospitals, that it was thought best to study admissions only. Therefore Table 2 was made to show a summary of first admissions and re-admissions of mentally diseased, mentally defective and epileptics in Virginia by race and rate per 100,000 population, 1914 to June 30, 1954.

This study of admissions gave us very similar results to those seen in Table 1. The white ratio had increased slightly, by approximately 20 points. The white rate of admissions had reached a peak in 1939 and had since been dropping. The rate for

TABLE 1

SUMMARY OF NUMBER OF PATIENTS IN HOSPITALS FOR THE MENTALLY ILL, MENTALLY DEFICIENT AND EPILEPTIC IN VIRGINIA, BY RACE AND RATIO OF PATIENTS TO THE GENERAL POPULATION. JULY 1, 1914 TO JUNE 30, 1954.

	White		Negro	
	Total in hosp.	Rate per 100,000	Total in hosp.	Rate per 100,000
Average 1914-19 ..	3,120	201.4	1,769	257.0
Average 1940-45 ..	7,118	353.4	4,069	613.8
Number June 30, 1954	8,561	314.6	4,681	600.6

TABLE 2

	White		Negro	
	Admissions	Rate per 100,000	Admissions	Rate per 100,000
Average for 1914-19..	1,160	75.0	576	84.1
Average for 1919-29..	1,155	68.2	521	77.1
Average for 1930-39..	2,043	113.3	727	111.6
Average for 1940-45..	1,980	98.3	931	140.3
Average for 1946-50..	2,248	97.9	1,035	151.6
Number for year ending 1954	2,630	96.7	1,148	147.3

[1] Read at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

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TABLE 3

	White			Negro		
	First admissions	Population	Rate per 100,000	First admissions	Population	Rate per 100,000
Average 1918-25	801	1,617,909	49.5	439	691,278	63.5
1926-35	1,220	1,770,441	68.9	534	651,410	82.0
1936-45	1,433	2,015,583	71.0	728	662,190	109.9
1946-55	1,455	2,581,555	48.2	773	737,125	104.8

Negroes, however, had increased by 63.2 points and there was no similar peak.

It was decided then to study only first admissions. Table 3 shows the total first admissions to state hospitals by race, the population of each race in the state and ratio per 100,000 of white and Negro population.

Table 3 shows that the findings emphasized by the other tables are still present in the study of first admissions only. This study shows that the white population of Virginia has increased by nearly a million since 1918, while the Negro population has increased by only 46,000. This is especially remarkable since the Negro birth rate is higher than that of the white. The rate per 100,000 white during the last 10 years has decreased and now approximates the rate of 1918-25. The Negro rate of admissions per 100,000 Negro population is still increasing and is now more than double the white and 41 points higher than during the period 1918-25.

The argument has been advanced that mental illness among the Negroes was due in the main to feeblemindedness, alcoholism and epilepsy. In order to study this question the first admissions to the state hospitals were studied when all admissions because of feeblemindedness, alcoholism and epilepsy without psychosis were excluded. This study is presented in Table 4.

This study shows the same picture: namely the greater number of Negroes admitted per 100,000 population and the great increase of mentally ill Negroes admitted during the last 10 years over the earlier years, when the ratio to population is considered. There is also this marked drop in the ratio of white admissions during the last 10 years.

This study ruled out mental deficiency, alcoholism and epilepsy as the cause of the difference between white and Negro and between Negro in 1918 and Negro in 1954.

This difference in admission rate is shown more accurately by Table 5 which gives the percentage of the total population, white and Negro, as well as the percentage of admissions, white and Negro.

This study shows the decline in admissions proportionately of the white, the relative decrease in the Negro population, but the continued increase in the Negro admissions.

Since mental deficiency, alcoholism and epilepsy did not explain the difference noted in the first study, another division of first admissions was made under separate categories according to diagnosis. This was done to see if any one mental disease syndrome could be held accountable for the differences noted.

Table 6 shows the result of this study. In this table the rate per 100,000 of the population of the race under consideration is given in each one of the categories con-

TABLE 4

First Admissions After Deducting Patients Admitted Because of Alcoholism, Mental Deficiency, and Epilepsy without Psychosis, 1918-1955.

	White		Negro	
	First admissions	Rate per 100,000	First admissions	Rate per 100,000
1918-25	737	45.5	411	59.4
1926-35	952	53.8	474	72.7
1936-45	1,038	51.5	626	94.5
1946-55	962	37.2	676	90.1

TABLE 5

Percentage of Total Population, White and Negro, and Percentage of Total First Admissions, White and Negro.

	White		Negro	
	% of population	% of admission	% of population	% of admission
Average 1918-25	70.1	64.2	29.9	35.8
1926-35	73.1	66.8	26.9	33.2
1936-45	75.3	62.4	24.7	37.6
1946-55	77.8	58.9	22.2	41.1

TABLE 6

RATE PER 100,000 PER RACIAL POPULATION

	White					Negro				
	Cerebro-art. senile	Schizo.	Manic dep.	Syph.	Alcoh.	Cerebro-art. senile	Schizo.	Manic dep.	Syph.	Alcoh.
1920....	6.1	6.4	10.3	1.4	1.1	9.5	12.0	16.5	2.4	0.4
1930....	9.1	9.4	18.9	1.9	8.1	19.6	16.1	9.4	7.8	0.6
1940....	15.6	9.0	5.8	3.2	22.1	20.8	10.4	25.2	14.6	2.4
1950....	15.0	6.4	2.1	0.9	12.0	25.2	14.2	14.0	13.1	5.6
1955....	16.1	7.2	1.3	1.0	8.7	22.4	21.7	5.5	7.1	4.3

sidered. These figures are given for the census years, since the figures can be checked more accurately by the population figures. This is done for all the years except 1955, which is estimated.

This study shows that for the white race, patients with cerebro-arteriosclerosis or senile psychosis, there has been an increase in rate. The rate for schizophrenia increased and then diminished slightly while the diagnosis of manic-depressive psychosis has been made much less frequently. There has been no increase in the number of patients with syphilis, but an increase in the number admitted because of alcoholism. The Negroes have a higher rate as well as increase in the senile-arteriosclerotic group, as well as those diagnosed as schizophrenia. The group diagnosed manic-depressive is larger, while those admitted because of alcoholism is smaller than the white. Those admitted because of syphilitic infection are more numerous than the white and more in 1955 than in 1920, but the difference is not sufficient to answer the problem. The table shows quite definitely that the reason for a larger ratio per 100,000 of Negro patients admitted now than 30 years ago, and also a higher rate of Negro admissions than white, is that the rate of senile-arteriosclerotics and especially of the patients admitted because of schizophrenia is higher. The rate per 100,000 of schizophrenics for the white changed from 6.4 in 1920 to 7.2 in 1955, while the rate for Negro admissions, which was 12.0 in 1920, changed to 21.7 in 1955. The greater number of admissions of Negroes in the senile-arteriosclerotic and the schizophrenic groups than whites, as well as the striking increase in the rate per 100,000 for Negroes in the 2 diagnostic categories, indicates that it is Negroes suffering from these 3 conditions that makes the difference in the number of admissions found to exist for the two races throughout the years and in the number of Negroes admitted in 1920 as contrasted with those in 1955.

The admissions in the senile arteriosclerotic group for both races increased during each decade, but the rate for the Negro was always greater. The Negro, because of his economic status, would be more inclined to transfer the care of the older members of the race to the State. As we wish to know whether segregation of the Negro was a factor in causing the difference in the hospitalization of the two races, it was thought proper to compare the tendency of both races to hospitalize patients over 65. This comparison is shown in Table 7.

TABLE 7

FIRST ADMISSIONS OF PATIENTS OF 65 AND OVER COMPARED BY NUMBER, RATE PER 100,000 OF POPULATION OVER 65 FOR EACH RACE, AND THE PERCENTAGE OF THE TOTAL ADMISSIONS

	White			Negro		
	No.	Rate per 100,000 white pop. over 65	Percentage of total admissions	No.	Rate per 100,000 Negro pop. over 65	Percentage of total admissions
1920.....	120	161	14.2	52	203	12.7
1930.....	175	192.2	15.2	82	320	14.7
1940.....	209	176.6	14.0	113	333.6	14.7
1950.....	213	123.8	16.2	153	360.5	20.0
1955*.....	474	241.9	32.6	155	327.2	18.9

* Estimated

The outstanding findings in this table are that while more Negroes over 65 are being admitted in 1955 than in 1920 and the rate per 100,000 of Negro population over 65 has gone up, the percentage of total admissions is not as great as the white. In other words, more white people are admitted who are over 65 and it is not the presence of old people that explains the preponderance of senile and cerebro-arteriosclerotic mental disease among the Negroes. One startling find was the great increase of the white population of Virginia over 65 during the last 10 years and the fact that there has been no such increase in the number of Negroes over 65. The Negroes die younger.

In conclusion then, the stress and strain of life and not just the aging process produces the senile and arteriosclerotic psychoses among the Negroes. The segregation of the Negro can be considered as one of the stresses of the Negro's life.

There were 2 other findings in our initial study that seemed worth further investigation. The first was the apparent decrease in white admissions to state hospitals in Virginia. Is it possible that this finding was due to a decrease in mental disease among the white that was not shared by the Negro? The second finding was the very slight increase in the Negro population in Virginia since 1914, in spite of a relatively high birth rate. If this could be explained by the migration of the Negro to the North, would it be the mentally healthy Negro who migrated and left those more disturbed at home, thus accounting for the situation found in Virginia?

In order to answer the first question it was thought best to attempt to get a cross section study of the number of Virginians hospitalized for mental disease during 1954. In Virginia there are 3 private hospitals, 1 state supported private hospital, and 2 psychiatric wards in general hospitals connected with the 2 medical schools. There are 2 V.A. hospitals that take mental patients. These institutions do not account for all the hospitalized Virginians since many are in V.A. hospitals outside the state and a few enter private institutions in other states, such as Maryland, North Carolina and Connecticut. An effort was made to canvass most of these institutions. Table 8 shows the results of this study.

The figures for the V.A. hospitals were taken from a survey of the V.A. hospitals. The figures for institutions outside of the State were based on letters from 10 private institutions answering to questionnaires. The figures from the Tucker Sanatorium are not official, but are certainly a very close estimate of the admissions to this hospital. It must be remembered that many of the patients admitted to the private hospitals have minor mental illnesses. They are not committable, therefore their numbers cannot be compared to the figures for the Negroes who are practically all sick enough to call for commitment.

The study indicates that the decline in state hospital admissions for the white race is due to the increase in the use of other facilities for the care of the mentally ill. The rate per 100,000 population for the Negro race is still higher, but about what is to be expected from the study of previous years. Before 1940 the private institutions and the psychiatric wards did not exert such an influence as they have since.

The migration to the North and Northwest started to have an effect on the Negro popu-

TABLE 8

NUMBER OF FIRST ADMISSIONS OF VIRGINIANS TO HOSPITALS TREATING MENTAL ILLNESS, EXCLUSIVE OF PATIENTS ADMITTED BECAUSE OF MENTAL DEFICIENCY, ALCOHOLISM AND EPILEPSY WITHOUT PSYCHOSIS, IN THE YEAR 1954.

	White		Negro	
	No. of admissions	Rate per 100,000 white population	No. of admissions	Rate per 100,000 Negro population
Psych. ward, U. of Va..	400	—	36	—
Psych. ward, M. C. V..	450	—	1	—
V. A. Hospitals*	400	—	300	—
St. Albans Sanitorium.	183	—	—	—
Westbrook Sanatorium.	80	—	—	—
Tucker's Sanatorium* .	350	—	—	—
DeJarnette's Sanatorium.	141	—	—	—
Priv. Inst. Outside of Va.*	75	—	—	—
State Hospitals	1020	—	762	—
Total	3099	111.9	1099	141.9

* Estimated

lation of the South soon after 1914. Table 9 indicates the condition of those Negroes who lived in the North, as far as mental disease is concerned. The rate for New England could be given only for 1922. The rate for New York is compared with that of Alabama and Louisiana.

The admissions of Negroes to state hospitals in northern states are certainly higher per 100,000 than in the South. Malzberg, in 1940, reported an incidence of schizophrenia (based on hospitalized cases and standardized for age) of 16.9 per 100,000 for native white persons of native parentage, 26.4 for native white persons of foreign parentage, and 32.8 for foreign born persons, and 51.1 for Negroes(2). We can conclude, therefore, that the incidence of mental disease among the Negroes of Virginia is certainly not increased because the more stable members of the race have migrated to the North. Indeed it would appear that the more stable ones stayed at home.

Summary

1. A study of white and Negro patients hospitalized for mental illness in the State of Virginia shows a higher ratio for Negro patients when the rate per 100,000 population of respective races is considered. Also there is a tremendous increase of Negro admissions now as compared to 1914.

2. This same finding is reflected in a study of first admissions of the mentally ill.

3. This difference is not due to mental deficiency, alcoholism or epilepsy without psychosis.

4. The difference is due in the main to the number of Negroes admitted for senile psychosis, arteriosclerotic dementia, or schizophrenia. This figure is larger than that for similar white admissions and greater now than in 1918.

5. The number of Negroes admitted because of senile and arteriosclerotic diseases is not due to the admission of more older Negroes than white, because persons 65 and over make up a greater percentage of white admissions than of Negro. Also the increase in admissions of Negro patients 65 and over has not sufficiently increased over the years to explain the difference between admissions now and 40 years ago.

6. The rate of first admissions to mental hospitals per 100,000 of Negro population in Virginia, while higher than the white, is lower than the rate in northern states. This would indicate that the migration of Negroes to the North did not increase the rate per 100,000 of those Negroes who stayed in Virginia. The probabilities are that the more unstable members of the race migrated.

7. The apparent decrease of rate in the admission of white patients to the state hospitals during the last 10 years is due to other facilities for treatment, such as the private hospitals and the psychiatric wards in general hospitals.

TABLE 9

First Admissions to State Hospitals Compared by Number, Rate per 100,000 of the Population of the Two Races.

State	Year	White		Negro	
		Number	Rate per 100,000	Number	Rate per 100,000
New England..	1922	7,669	104.8	182	230.2
New York....	1922	8,230	86.9	324	163.2
	1934	10,442	85.9	904	218.9
	1944	11,923	92.6	1,104	193.2
	1953	13,967	99.2	2,176	237.0
Alabama	1922	350	24.2	277	30.8
	1938	944	55.2	422	44.6
	1946	906	49.0	457	46.4
	1951	883	42.5	500	51.0
Louisiana	1922	665	60.6	404	57.7
	1954	1,902	105.8	945	107.1

DISCUSSION

The history of the United States over the last hundred years is one of change. The industrial revolution, the origin of great cities and the rise of both capitalism and organized labor have been only a few of the many rapid changes that have affected American life. However, the most rapid change, and perhaps the most extensive during the last 50 years, has been found in the South. The culture has been changed from predominantly rural and based on agriculture to urban and industrial(3). This period of change has involved all the people living in the area and has put pressures on each individual that always accompany change. Mar-

garet Mead in *The Introduction to Cultural Patterns and Technical Change,* states

> While it is still not possible to say that a given culture is less conducive to mental health than another, because of our lack of cross-culture criteria for mental disorders, it is possible to say that under situations of stress and strain, of rapid change and consequent disorientation, there is likely to be an increase in manifest mental ill health(4).

In the South, therefore, during the last 50 years, there has been a steady migration from farm to city and from agriculture to industry. This change began soon after the Civil War, but has become accelerated especially in Virginia during the last 20 years. This change, with many others has altered the way of living in the South and undoubtedly has had a great deal to do with the manifest mental illness found in that area. Within the same area, however, the most profound has been the colored segment of the population.

Before 1865 the Negro culture as a whole was a slave culture. From 1865 to 1877 the Negro was given equal rights as a citizen by the 14th and 15th amendments to the Constitution. From 1877 to 1915 the Negro was segregated under the definite concept that he was an inferior being, lived in a culture of his own, and was supposed to know his place, which though respected, was nevertheless subservient to the white. The Negro was supposed to be very happy, very religious and free from the usual anxieties that troubled the white.

For approximately 50 years the Negro-white status was nearly stationary. White and Negro intermingled but with the relation of master to servant(5).

During World War I several things happened to change this condition. The Negro was well received abroad and found that there were places in the world where white and black lived together. There was the beginning of the industrialization of the South and the great movement from the farm to the city. The migration of the Negro to the North and Northwest began in earnest and has continued to the present day. Next came the depression and the Roosevelt administration, which brought the first legal successes of the Negro; then World War II when the Negro fought shoulder to shoulder with white, and finally the post-war period. Now the Negro has won repeated legal battles, has become a political power to be reckoned with, and has wealth and power enough to be influential in the business world. There is now a substantial Negro middle class, and the wages paid the Negro are higher than ever before. The Negro no longer works on the small farm or as a domestic but has a position in the city or in industry.

Where the Negro of 1915 was poor, illiterate and a servant, now he is better dressed, owns his home and probably a car. He can go to high school, to college or university. He makes and spends more money, yet the last 40 years have been an uneasy time. There has been no definite place he could call his own. He is constantly stirred up by his needs, as well as by the propaganda of his leaders, by the Communists and by those politicians who would use his power. The labor unions came into the South and organized both white and black labor. The F.E.C.P. and the minimum wage law were enacted.

The Negro has improved economically since 1940. He has moved from an agricultural to an urban culture, as has the white man. He has been industrialized. He migrated to the North to better his condition. In spite of all this, he is more segregated now than 40 years ago and while then his status was fixed, now he has no status as he moves from a culture of his own into a white culture(6).

Forty years ago the Negro and white family lived across the street from each other. The children played together and the adult Negroes worked in the home or on the farm. The Negro had a definite status and in that position he was supposed to be happy while he sang his songs and prepared for the next world.

The relationship between white and colored was that of master and servant. The Negro had a place which was honorable and respected but definitely inferior. The white children of today do not know the Negro. The Negro servant has gone from the home and the Negro child is very closely segregated. The Negro of today is an unknown person, certainly until he reaches college or graduate school.

Cultural changes which are forced on a

people against their will, by fiat or by authority from outside or above have been found by the experts of the U. N. to produce major disturbances of mental health. Margaret Mead in her book recommends that such changes be brought about by understanding and cooperation at all levels of the culture. The total person and the total culture must be considered and the change must be made slowly with due consideration for the psychological make-up of the individuals. She points out that frustration of a subculture has the same effect as frustration of the individual.[7] There will be regression and a return to more primitive forms of living. Richard L. Jenkins in his book *Breaking Patterns of Defeat* describes the average American Negro community as poor and under-privileged. It is characterized by more primitive, uninhibited living. The causes are undoubtedly cultural; the results are aggressive crimes and psychosis.

A social or a culture situation which gives rise to insoluble problems and much frustration may be expected to result in a higher incidence of schizophrenia than a social or culture situation which gives rise to less frustration(8).

Dr. Jenkins compares the Negro with the Jew as far as their ability to stand segregation is concerned. The Negro has a very loosely constructed family organization, and worships strength. The Jew has a very closely knit family and can admit weakness. The former culture under stress yields psychoses and aggressive crimes, while the latter develops psychoneuroses and the ability to stand suffering without retaliating.

The annual report of the department of welfare and institutions on commitments to county, city jails and city jail farms in the State of Virginia for the year ended June 30, 1955 gives us the following table.

TABLE 10

JAIL COMMITMENTS FOR THE YEAR ENDING JUNE 30, 1955.

	White		Negro	
	No.	No. per 100,000 white population	No.	No. per 100,000 Negro population
	66,011	2,382	44,380	5,587
For drunkenness.	28,524	1,029	13,129	1,652

This table shows that the Negro community exhibits the other characteristic of a frustrated community, namely crimes of aggression.

The Negro in Virginia is far better off economically and legally than ever before but he is more closely segregated. He has lost the security of his own culture and is moving rapidly toward a middle class white culture. This period of uncertainty and close segregation parallels the increase in the rate of Negroes admitted to the state hospitals of Virginia for cerebro-arteriosclerosis, senile dementia, and especially for schizophrenia. Very few, if any, of the steps recommended by sociologists and cultural anthropologists, who are experts in culture change, have been carried out to protect the Negro or the white man as this change in relationship is brought about. It seems to us most reasonable to believe that the preponderance of mental disease in the Negro over the white man and its increase in ratio to Negro population in Virginia is due to segregation and to the period of uncertainty accompanying culture change.

CONCLUSION

A study of state hospital statistics for the State of Virginia from the year 1914 to the year 1955 shows the following:

1. There has been a larger ratio of Negroes admitted to state hospitals per 100,000 population of Negroes than of white per 100,000 white population throughout the 40 years.

2. There has been a tremendous increase in the admission rate for Negroes per 100,000 Negro population over the 40 years and the present rate practically doubles that of 1914.

3. This increase in rate is due mainly to an increase in senile psychoses, cerebro-arteriosclerosis and schizophrenia. Admissions for schizophrenia parallel in their behavior most closely the increase in the ratio.

4. The Negro has experienced similar changes to those of the white during this period with 2 additional factors: segregation has become more severe; and he is no longer the servant but the equal of the white.

5. It is felt that the fact that there is more mental illness among the Negroes of Virginia than among the whites and more mental ill-

ness among the Negroes in 1954 than in 1914 is due in large degree to segregation and to the uncertainties of the Negro race as they cross from one culture to another.

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PSYCHIATRIC MANAGEMENT OF SUICIDE PROBLEMS IN MILITARY SERVICE [1]

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This study was designed to determine the characteristics of individuals who threaten or attempt suicide and are brought to the attention of the military psychiatrist; and to test a method of management intended to prevent further suicide attempts.

METHODS AND MATERIALS

Individual Characteristics of the Population.—The subjects for this study were cases from an outpatient neuropsychiatry ("Mental Hygiene") clinic at the U. S. Army Hospital, Fort Devens, Massachusetts, during the months immediately following ceasefire in Korea. The observations cover the period August 1953 to December 1954. Many different types of units comprised the base, including a large prison stockade and 29 General Reserve Units in training. Among the latter, distribution by service function was as follows: 2 signal corps, 9 quartermaster, 6 medical, 8 ordnance, and 1 finance. Also stationed there was the major portion of a regimental combat team and a large school of the Army Security Agency. Some of the pertinent characteristics of peacetime military life at Fort Devens, as elsewhere, were discipline with or without harassment, enforced closeness, boredom, real and imagined inequities in assignment, and extramilitary personal problems.

The 75 patients chosen were soldiers or civilian dependents. During the 15 months of the study, 54 threatened and 21 attempted suicide and were brought to the attention of one of the 3 psychiatrists at the Army Hospital. A comparison [4] group was established by selection of every tenth chart from the files of the Mental Hygiene Clinic during the same period. In this group were 2 cases from the suicidal series, which may represent the incidence of the problem of suicide in the Clinic's case load.

The general characteristics of the suicidal group were compared with those of the random sample to determine whether the two could be distinguished. Data were gathered describing age, circumstances of referral, referral source, military rank, race, mode of entry into service, diagnosis,[5] religion, marital status, length of service, education, follow-up for continuation of life and military career, and the distribution of the cases among the Clinic's 3 doctors (approximately one-third being seen by each).

Method of Management.—The method of management was evolved from the following: (1) clinical interviews which gave no evidence of depression or psychotic confusion in an age group in which depressions are infrequent; (2) an impression that these soldiers and civilian dependents frequently gave historical evidence of crudely manipulative or delinquent behavior without evidence of symptomatic depression or psychosis; and (3) a hypothesis that the suicidal threat or attempt was an extension of this behavior: a method of emotional blackmail, moving people about the patient in ways that would make him more comfortable. This hypothesis was based in part upon the psychiatrists' reactions during the interviews with these patients.

[1] Read at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

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[4] This was called a "comparison" rather than a "control" group because the latter should have had a different kind of management for the same suicidal threats and attempts.

[5] With regard to criteria for diagnosis, we adhered to the U. S. Army's Standard Diagnostic Nomenclature, which is similar to that of The American Psychiatric Association.

The technique of management was as follows:

1. A personal interview was held with each patient by one or more of the 3 psychiatrists.

2. The psychiatrist who saw the patient discussed the information in the history, whether it had initially been elicited by that doctor or not, in an effort to establish rapport by making clear that the psychiatrist's interest extended to the point of informing himself about who the patient was and how he came to be there.

3. During this procedure the doctor arrived at a diagnosis, and an understanding of the nature and extent of the problem, based upon the history, the mental status, and (infrequently) the use of psychological testing.

4. Each patient was then told, by the use of the information that had been obtained, that the doctor understood his unhappiness.

5. He was told that he could not be helped in terms of his concrete demands: for hospitalization, for discharge, for change of assignment, for transfer, for change of physical profile, for light-duty slip, etc.

6. He was told that it was unfortunate, but true, that if he really needed to kill himself, the psychiatrist did not feel that anyone could stop him, and that therefore no one but the patient could keep himself alive.

7. He was told that if he killed himself it would be considered the act of a sane man on the basis of the interview, and his family would therefore lose any material benefits resulting from his death. He was also told that if he subsequently tried to kill himself and did not succeed, the army regulations provided that he would have to stand court martial for the offense.[6]

8. Whenever possible the referring physician, commanding officer, or other referral source was informed of these steps and encouraged to manage the patient in the same way, with the responsibility for such management resting upon the psychiatrist.

9. None of the patients was hospitalized and none was given a return appointment.[7]

[6] The setting of these limits without a hostile context, hence without provoking retaliation on the part of the patient, was the crucial performance on the part of the psychiatrist.

[7] The same procedure (steps 1 through 9) was followed with the civilian dependents with appropriate variations.

RESULTS [8]

The suicidal group was significantly younger than the comparison group (Table 1-A). The majority were in the 20 to 25 age range. Their mean age was 22.0 years; that of the comparison group 24.6 years. Fisch(1) reports the average age in his study as 23; Arieff, McCulloch and Rotman(2) as 20 to 30; and Schmidt, O'Neal and Robins(3) report the average age of the men in their study as 44; the women as 34.

The population was predominantly Caucasian (Table 1-B). There was no significant difference between the comparison and suicidal group with regard to marital status (Table 1-C); and none in religious preference (Table 1-D).

No significant difference appeared in the length of education (Table 1-E). Figures for the educational level attained within the suicidal group showed that 72% had more than 8 grades of education. This agreed with the experience of Arieff, McCulloch and Rotman(2) who found that in a series of 500 cases of attempted suicide, 76% had gone beyond the eighth grade.

There was no significant difference in the mode of entry into service between the two groups (Table 2-A). However, 3 attempts in a group of 17 draftees (1 to 5.7) when compared with 13 attempts in a group of 46 enlistees (1 to 2.5), is perhaps at least of borderline significance.

Table 2-B compares the length of service of the two groups. As might be expected, because of a positive correlation between months of service and chronological age, the suicidal group as a whole had less time in the army (Table 1-A). This difference was especially noticeable after 72 months of service. This is in accord with one of the original

[8] It was felt that suicidal patients resembled other neuropsychiatric patients more closely than they resembled soldiers in general. It follows, then, that the significant differences between suicidal and nonsuicidal individuals do not stand out in this study as clearly as they might otherwise, because we selected a comparison group of other neuropsychiatric patients. Consequently we emphasize whatever differences appear in the tables by liberal use of the word "significant."

TABLE 1

A. Age in Years of Comparison and Suicidal Groups

	Comparison	Suicidal Total	Threat	Attempt
Under 20	6	22	17	5
20 to 25	50	44	32	12
26 to 30	9	5	3	2
31 to 40	7	3	2	1
Over 40	3	1	0	1
Totals	75	75		

B. Race of Comparison and Suicidal Groups

Negro	4	5	3	2
Caucasian	71	69	51	18
Mongoloid (Japanese)	0	1	0	1
Totals	75	75		

C. Marital Status of Comparison and Suicidal Groups

Single	40	47	36	11
Married	34	27	18	9
Divorced	1	0	0	0
Separated	0	1	0	1
Totals	75	75		

D. Religious Preference of Comparison and and Suicidal Groups

Catholic	32	36	28	8
Protestant	31	34	23	11
Jewish	7	2	2	0
Unknown	1	2	0	2
None	4	1	1	0
Totals	75	75		

E. Years of Education of Comparison and Suicidal Groups

8 or less	20	21	17	4
9 to 12	41	36	26	10
13 to 16	10	12	9	3
Unknown	4	6	2	4
Totals	75	75		

premises concerning the age range of the suicidal group in military service.

Comparison of military rank for both groups (Table 2-C) indicates an overwhelming predominance of privates with a negligible number of commissioned officers. These data agree with those of Fisch(1) who found only 4 commissioned officers in his series. The majority of his cases were in the bottom two enlisted ranks. Again this is probably at least partially a function of age.

Table 2-D indicates that the greatest frequency of referrals in both groups was from medical doctors in the unit dispensaries. This is probably a function of the way sick call was used by this group of soldiers to complain about army life in general, rather than

TABLE 2

A. Mode of Entry into Service of Comparison and Suicidal Groups

	Comparison	Suicidal Total	Threat	Attempt
Drafted	18	17	14	3
Enlisted	49	46	33	13
Civilian dependents *	8	12	7	5
Totals	75	75		

B. Months of Service of Comparison and Suicidal Groups

0 to 36	44	50	40	10
37 to 72	15	11	6	5
72 plus	8	2	1	1
Civilian Dependents *	8	12	7	5
Totals	75	75		

C. Military Rank of Comparison and Suicidal Groups

Private	44	50	38	12
Private first class.	8	5	4	1
Corporal	2	4	3	1
Sergeant	9	3	2	1
Sergeant first class	0	1	0	1
2nd Lieutenant	3	0	0	0
Colonel	1	0	0	0
Civilian dependents *	8	12	7	5
Totals	75	75		

D. Referral Source of Comparison and Suicidal Groups

Commanding officer	15	11	10	1
Medical doctor	37	37	26	11
Self-referred	9	12	10	2
Confinement personnel	12	6	3	3
Defense counsel	1	2	2	0
Inspector general.	1	0	0	0
Family	0	4	1	3
Chaplain	0	3	2	1
Totals	75	75		

* All females.

(*Continued on next page*)

TABLE 2—Continued

E. Diagnoses of Patients in Comparison and Suicidal Groups

	Comparison	Suicidal Total	Threat	Attempt
Total Immaturity reactions	21	38	27	11
Emotional instability	11	23	15	8
Passive-dependency	5	7	6	1
Passive-aggressive	4	7	5	2
Aggressive	1	1	1	0
Total Character disorders	14	25	20	5
Inadequate personality	3	6	6	0
Antisocial	5	9	6	3
Asocial	3	3	3	0
Schizoid	1	4	2	2
Paranoid	0	2	2	0
Hysterical	1	1	1	0
Addiction	1	0	0	0
Total Psychoneuroses	4	2	1	1
Obsessional-compulsive	1	0	0	0
Depression	1	0	0	0
Anxiety	1	1	0	1
Mixed	0	1	1	0
Somatization	1	0	0	0
Acute Situational maladjustment	8	5	2	3
Neurological problems	12	0	0	0
Mental deficiency	2	1	1	0
Total Psychoses	1	0	0	0
Manic-depressive	1	0	0	0
Schizophrenia	0	0	0	0
No psychiatric disease	13	4	3	1
Totals	75	75		

of a particular physical illness. It was also, to some extent, a reflection of the referral procedure at the particular army base which required that almost every patient be seen by a doctor before coming to the Mental Hygiene Clinic. In addition, as the majority of threats were revealed after coming to the Clinic (Table 3-A), it is clear that the large number of patients referred by physicians does not necessarily indicate that they were the first persons to whom the threat was revealed. However, the person indicated was always the first to know about the threat and to be in a position of responsibility for the soldier's welfare. Table 2-D seems to indicate a significant difference between the number in the two groups who were referred from confinement personnel.

Analysis of the attempts (Table 3-B) indicates slashing of wrists by far the most frequently chosen means. It might be expected that some attempts would involve the use of firearms, but it was extremely difficult for soldiers in garrison to gain access to loaded weapons except on the rifle range. Several authors comment on the relation between the method chosen for suicide and the seriousness of the attempt. Fisch(1) studied 114 suicidal attempts among which there was one death. He notes cutting of the wrists and ingestion of drugs or poisons as the most common methods. On the other hand, among 46 deaths by suicide among naval personnel during the same period,

TABLE 3

A. Military Personnel to Whom Suicide Threat First Revealed

	Male	Female
Mental hygiene clinic interview	35	6
Medical doctor	7	1
Confinement personnel (Military police, etc.)	1	0
Commanding officer	2	0
Chaplain	1	0
Defense counsel	1	0
Totals	47	7

B. Nature of Suicidal Attempts

Slashes: wrists, antecubital fossa	6	1
Punctured tympanic membranes	1	0
Strangulation (with belt)	1	0
Lying on road	1	0
Carbon monoxide fumes (this patient died of CO poisoning)	1	0
Gas range fumes (Methane)	1	0
Drugs (Aspirin, "Nerve" pills, or unspecified)	2	3
Unspecified poisons	1	0
Unknown	2	1
Totals	16	5

shooting and gas inhalation were the two most common methods employed. Hendin (4) reports that in his series inhalation of illuminating gas and hanging were the most common methods used in successful attempts. He found that cutting and ingestion of sleeping pills were more common in unsuccessful attempts. Stengel(5) reports that 25% of his series ingested drugs, with wounding and coal gas inhalation as next most common. Arieff, *et al.*(2) assert that the method chosen serves as a fairly reliable index to the genuineness of the desire to die. Oliven(11) makes a similar statement.

Comparison of the diagnosis (Table 2-E) indicates a significantly larger number of "character disorders" and "immaturity reactions" among the suicidal group. Among the comparison group there was a larger number of "neurological problems," as well as "no psychiatric disease." These findings are in agreement with those of some workers and in conflict with those of others. For example, Teicher(6) in a study of 30 suicidal attempts among naval personnel reports that 24 were "insecure, inadequate, immature personalities." Fisch(1), in studying 114 attempts among naval and marine corps personnel, reports 43 "immaturity reactions," 23 "personality disorders," and 32 "psychotic reactions." Laufer and Casriel(7) reported on suicidal gestures among occupation personnel on Okinawa and found "most" of their cases to be "immaturity reactions." Raines and Thompson(8) however, in discussing 164 gestures and attempts found only 15 "character disorders" and 62 "schizophrenics," with 22 others classed only as "delirium."

Table 4 presents results of a follow-up study for continuation of life and outcome of service from 5 to 19 months after the patients were first seen. The most recent data were collected in July 1955. One patient in the suicidal group had died by suicide.[9] For the rest, the table indicates a significantly higher number of administrative discharges, *i.e.* undesirable, bad conduct, and dishonorable, among the suicidal group.[10]

TABLE 4

FOLLOW-UP AFTER 5 TO 19 MONTHS (MAY OR JULY 1955)

Soldiers	Comparison	Suicidal
Dead	0	1 (Suicide)
Alive	63	62
Impossible to follow	4	0
Totals	67	63
Still in service	22	33
Discharged	41	29
Totals	63	62
Nature of discharge:		
Honorable	26	10
Medical	4	1
Administrative (including bad conduct and dishonorable)	11	18
Totals	41	29
Civilian dependents		
Dead	0	0
Alive	0	6
Impossible to follow	8	6
Totals	8	12

DISCUSSION

The Data.—In a general way it may be seen that by contrast with the comparison group the suicidal group were younger, in service a shorter time, referred from confinement status less frequently, and were more frequently diagnosed as "character disorders" and "immaturity reactions." On follow-up they were more likely to have received an other-than-honorable discharge.

The two groups showed no significant differences regarding race (both predominantly Caucasian), incidence of divorce, mode of entry into service, religious preference, years of education, rank (both groups were chiefly privates), and sources of referral (chiefly M. D.'s in both groups).

[9] We have no other explanation for this death save a lack of diagnostic acumen. Within 12 hours after being seen at the Clinic, the patient went home on pass to his family's farm in New Hampshire. There he killed himself by driving a car behind the barn and running a vacuum cleaner hose from the exhaust pipe into the car. Obviously this was not an accidental death.

[10] *Significance* as used in this study does not connote "statistical significance" except with regard to there being a smaller number referred from confinement, and fewer honorable and more administrative discharges in the suicidal group, in which case the results do meet the test of statistical significance ($p = < .05$).

Relation to Civilian Population.—The study indicates the characteristics and results of such management in only a particular youthful age group. The problems leading to their suicidal threats or attempts are probably not the same as those in the fifth and sixth decades of life; consequently we would not recommend a similar method of management for these age groups. This point of view is supported by others. Hendin(4) found that the age of those with intermediate or maximal intent to die was 5 years higher than the average of the entire group. He also notes that the mean age at which suicide occurs is 10 years above that of the unsuccessful attempts. Schmidt, *et al.*(3) similarly classified 120 suicidal attempts as "serious" or "not serious." The average age in the "serious" group was 48; in the "not serious," 34.

No generalizations are warranted from this study to a civilian population. It is quite likely that because of the nature of military life, more people are brought to the attention of psychiatrists on an army post than would be in civilian life. In our opinion this is because in the peacetime army with which we worked, a principal goal of life was the avoidance of criticism. Consequently, responsible people were particularly vulnerable if they were to "disregard" the suicidal problem by not referring the patient immediately to a psychiatrist.

The Clinical Interview.—In clinical interviews, these patients gave no evidence of symptomatic depression or psychotic confusion, but rather of impulsiveness, recklessness, and a particular kind of exploitation, *i.e.* to make someone else more interested in taking care of them than they were in caring for themselves. Only 2 gave evidence of psychoneurotic symptoms. They did not speak of feeling guilty, hopeless, or unworthy. They showed no hypochondriacal preoccupation nor somatic delusions. There was no evidence of anorexia, insomnia nor psychomotor retardation. They gave no evidence of a desire to die or be killed; but rather that they did not "care" or at worst felt "as if they might as well be dead." At cross-sectional mental examination, some were tearful and agitated, raising the possibility that they may have been cases of previously retarded depression who were beginning to move about more freely, with attendant increased risk of suicide. However, after obtaining the history, in no case did we find a diagnosis of depression of a psychotic or psychoneurotic nature warranted (Table 2-E).

These patients showed histories characterized by delinquency, truancy, and poor school record in general, temper tantrums, enuresis, syncopal attacks, inability to postpone gratification, poor work record, and a family history frequently described by the patient as without harmony. This is comparable to the observations reported by Teicher(6).

Emotional Blackmail.—Although we believed that what we were dealing with were essentially threats and gestures, rather than serious attempts to die, we could not ignore that each gesture carried with it the possibility of success. Batchelor(9) stresses the point that the psychopath, because he is so prone to act impulsively, may kill himself before there is time for anyone to intervene. Studies in which the seriousness of unsuccessful attempts is assessed(1, 6) generally include psychopaths in the not serious or minimal intent groups. In our nomenclature these would be the "antisocial" or "asocial character disorders."

We were impressed by the extent of personal uneasiness experienced by the commanding officers, non-commissioned officers, and medical doctors in the face of this behavior. Clearly someone had to assume responsibility for managing the patient: to take steps by enforced hospitalization to prevent him from killing himself or to take the chance that he would not do so. The feeling that "something must be done" is a well-established reflex among members of the medical profession in response to a patient's complaint, and the pressure upon the physician to "do something" when the patient presents suicide as the "chief complaint" is particularly great. (See the discussion on these points by Stengel(5).)

This urge to "do something" stems in part from the traditional concept that patients at the onset of an acute psychosis may use this as a means of asking for help by letting someone know of their extreme distress. We felt that in patients with character disorders,

the same qualitative situation exists; *i.e.* they are letting someone know of their distress, the "appeal character" of the attempt according to Stengel(5). This differentiation of character disorder from psychosis must be made on other grounds as described above.

Management.—The rationale for management arose from the following considerations:

1. Certain individuals are incapable of setting internal limits upon doing as they wish (an idea not original with us). Further, they probe the environment to find how far they can go in getting their wishes granted. It is necessary, therefore, for the environment to set limits for them, and it should be made clear that the limiting agent is firm but not antagonistic. The absence of antagonism is essential and therapeutic. First, it makes clear to the patient that the psychiatrist, representing the environment, has not been frightened by his behavior, and hence is not subject to intimidation or manipulation. Second, it allows the patient little opportunity to feel that he must overcome disbelief or anger by resorting to a more serious attempt.

2. Hospitalization must be avoided because it enables the patient to escape from the pressures of the specific situation which precipitated his action. Also, whenever a patient has been hospitalized, it whets his appetite to try again. Further, it was felt that in some patients their guilt about being hospitalized would require them to seek re-hospitalization as reassurance that they had been sick in the first place.

Nor are the benefits of hospitalization lost to the other men in the unit. Lowered morale and an epidemic of similar behavior among the other troops may result. Fisch(1) reports that all his patients were hospitalized as a result of their attempts. We feel that his material demonstrates one of the unfortunate consequences of such hospitalization in that he was unable to rehabilitate any who expressed an unwillingness to return to service.

3. These patients were experiencing despair as a reaction to the anxiety engendered by enforced closeness, discipline, boredom, and inequities of assignment (real or imagined); rather than as the result of guilty fear or helpless anger. Consequently, suicide becomes either a lever to move the world into a more comfortable arrangement, or an act of revenge upon the army which is experienced as not having loved and cared for him properly. [See Thompson(10).]

Therapeutic Aspects.—In addition to preventing the patient from making himself more sick in the dependency-fostering setting of the hospital, this method of setting external limits constitutes a positive psychotherapeutic performance. These patients are not available for psychotherapy in the ordinary sense, because they clearly do not desire to change their patterns of behavior. Thus two goals were achieved despite the calculated risk. First, the patient, like a child, can be helped to grow by learning what is expected of him; *i.e.* he is given the opportunity to become responsible for his own behavior. Second, he is not permitted to blackmail others into changing unpleasant circumstances for him by threatening or attempting suicide. That is, his efforts to strike back at the parental figures who have thwarted his dependency gratification are forced into other channels. The purpose was therefore, to enlarge his range of adaptive response by allowing him to accept that this particular response was a failure.

As an incidental finding for the "others," particularly the commanding officers and medical doctors, this procedure had an educational value. It suggested to them that psychiatry has no magic. It further demonstrated the difference between taking a threat seriously and allowing oneself to be blackmailed. Finally, it reminded other physicians of the difference between individuals with depression and those with character disorders, in that the latter tend to use suicide for the purpose we have discussed.

Weaknesses of the Study.—There were three major defects in the study. First, cases seen prior to the formalization of the management were included. Second, a uniform group of exact criteria for the diagnoses were not used, nor were specific criteria provided for inclusion or exclusion regarding a particular diagnosis. Third, it was always known, either before the clinical interview or during it, that the patient had either threatened or attempted suicide. This raises the possibility that diagnoses might not have

been made at all on a number of these patients save for the psychiatrists' awareness of the suicidal problem.

Regarding the first defect, about half way through the study, the three psychiatrists agreed that what each had been doing until then seemed familiar to all and that for the rest of the study each would be saying approximately the same things to his patients. The question remains unanswered as to what the patients heard the doctors say, or for that matter, whether the things agreed upon really were said.

Regarding the second defect, the U. S. Army Standard Diagnostic Nomenclature was used and this represents a defect inherent in present-day psychiatric methodology to which we fell heir.

Summary

This study describes a group of outpatients who had threatened or attempted suicide and were brought to the attention of military psychiatrists.

Data are presented comparing the characteristics of this group with a similar number of nonsuicidal patients chosen at random from the files of the same mental hygiene clinic.

The data indicate that the suicidal group were younger, had less time in service, and were more frequently diagnosed as "character disorders" and "immaturity reactions" than the comparison group. Within the suicidal group itself, the frequency of attempts was higher among enlistees (1 per 3.5) than among draftees (1 per 5.7).

Each patient was handled in a like manner, and none was hospitalized nor seen a second time.

A follow-up of 5 to 19 months indicated a low incidence of suicides among the patients managed in this way (1 in 75); also a significantly higher number of administrative discharges, and a significantly lower number of honorable discharges among the suicidal group.

Comparison with civilian population, characteristics of the clinical interviews, rationale of management, therapeutic aspects, weaknesses of the study, and the nature of emotional blackmail are discussed.

NO OBSERVED DIFFERENCES BETWEEN SUICIDAL and COMPARISON GROUPS

RACE
MARITAL STATUS
RELIGIOUS PREFERENCE
YEARS OF EDUCATION
MODE OF ENTRY INTO SERVICE
MILITARY RANK

Fig. 1

OBSERVED DIFFERENCES BETWEEN SUICIDAL and COMPARISON GROUPS

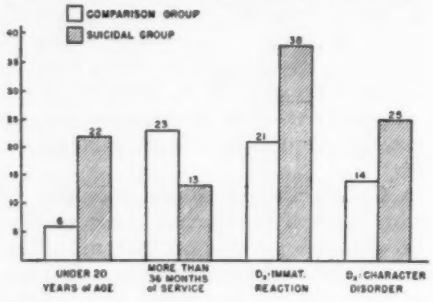

Fig. 2

Conclusions

1. Suicide problems in service, because of the special characteristics of military life in interaction with specific problems of the patients, are significantly different from those in civilian life. Some of these characteristics and problems are amenable to study and are described.

2. The low incidence of actual suicide on follow-up suggests that the method of man-

OBSERVED DIFFERENCES BETWEEN SUICIDAL and COMPARISON GROUPS

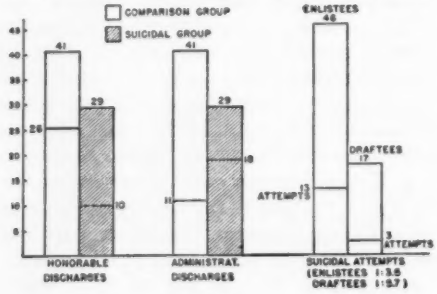

Fig. 3

agement described was successful. However, a comparative study on a similar group, using a different method of management, would be required to validate this point.

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DISCUSSION

Col. Albert J. Glass (Washington, D. C.).—From my experience the authors of this paper are correct in stating that suicidal gestures or attempts by military personnel create marked uneasiness in those who occupy positions of command or medical responsibility. It is probable that the restrictions of military existence produce a greater frequency of acts and threats of self-destruction in the young military population than a comparable age group in civilian life, although I know of no statistical data that will prove or disprove this assumption. At any rate, suicidal gestures are a common cause of referral to the military psychiatrist. Under these circumstances the psychiatrist is eagerly accepted as the proper person to solve the dilemma of whether to react against the intuitively understood hostile behavior of the suicidal subject with equal agressiveness, or to yield to the threats of suicide by removing the individual from the situation either by hospitalization, reassignment, or some other environmental manipulation. Faced with this responsibility the military psychiatrist also suffers from anxiety since he has no certain method of identifying the few whose suicidal attempts are an ominous portent of later more successful self-destructive efforts from the many whose suicidal gestures may be safely disregarded. Too often the military psychiatrist finds it more comfortable to allay his own anxiety and hospitalize all such referrals. As indicated in this paper, hospitalization unfavorably influences the morale of the group and facilitates the suicide subject to fixate neurotic and immature patterns of adjustment.

The unique value of this presentation lies in its account of a direct and operational approach to this problem. Methods in the management set forth herein can be duplicated by others. The experience of the authors indicates that impressive results are obtained by a firm but sympathetic management which is based upon (1) clarification of the situational conflict; (2) placing of the responsibility for the self upon the subject; and (3) the blocking of secondary gain.

It is perhaps not surprising that this technique is similar to methods employed in the treatment of combat psychiatric casualties. Since World War II, military psychiatrists who work with psychological problems that are engendered primarily by external stress conditions appear to arrive independently at similar conclusions; namely, (1) that abnormal behavior or symptoms are best understood in terms of adaptation to the present, rather than psychopathology caused by conflicts of the past; (2) that individuals must be aided to overcome and master anger and anxiety due to realistic external conditions and social obligations; (3) medical evacuation and hospitalization only confirm and continue helpless and evasive patterns of behavior.

Undoubtedly there are risks in any method which insists upon further efforts by the individual to continue functioning in what is for him a distressing and painful existence. Some failures are inevitable as demonstrated by repeated suicidal attempts, or due to errors in diagnosis such as the one death reported in this paper. However, even the most elaborate and time-consuming techniques of observation and diagnosis are not infallible.

The authors correctly point out that their technique is not directly applicable to similar phenomena in a civilian setting or in an older age group or in a mental hospital population, all of which are much less homogeneous in age and psychopathology than the subjects of this study.

I congratulate these authors for a splendid contribution in an area of military psychiatry in which there has been much uncertainty and doubt. Their work demonstrates that practical research can be carried out in the "field" by making use of the clinical material available. Because an operational and duplicable approach was employed, information obtained by this experience can be repeated and, if confirmed, will add to our knowledge and therapeutic armamentarium.

THE ROLE OF THE PSYCHIATRIST IN TEACHING COMPREHENSIVE MEDICAL CARE[1]

DONALD C. GREAVES, M.D.[2]

Comprehensive medical care has been defined as a science which includes not only the treatment and cure of sick human beings, but the prevention of disease and the preservation of health. It is essentially an effort to humanize medicine, and to train the physician as a comprehensive human biologist with emphasis shifted from the training of more physicians to the training of better ones. The physician so trained should begin his professional life with the facts and technical skills necessary to make diagnoses and institute treatment, as well as the ability to recognize the importance of social, cultural, and emotional factors on genesis, prognosis, and therapy of disease. Such training is the acknowledged goal of comprehensive medical care.

In the last decade, medical educators have been increasingly concerned as to whether their students were adequately prepared for the practice of this kind of medicine. Such concern did not spring unprovoked from faculty meetings, but, like most of the advances in medical sciences, resulted directly from the unfulfilled needs of patients. There was a growing awareness of the importance of emotional factors in clinical medicine. The practicing physician, they were told, finds that a large number of his patients have illnesses which are either primarily emotional or strongly influenced by emotional and social factors. In their own teaching centers they saw that treatment frequently suffered from the increasing complexity of modern scientific medicine. They saw treatment become broken into a large number of speciality clinics with much duplication and waste. They saw contact broken between the patient and his student physician. There was little opportunity or time for the physicians or students to get to know patients as human beings with human problems. At the same time, they knew that unsatisfactory patient care was most frequently the result of an inadequate teaching program rather than vice versa. Thus, there was a movement toward re-evaluation and reorganization of curricula. For example, a sweeping reorganization of the fourth year curriculum was instituted on a full scale at the University of Oklahoma School of Medicine and University Hospitals as early as July 1952(1, 2). The Oklahoma program demonstrated the value of this method ("The Longitudinal Curriculum"), and it has since been adopted at several medical schools.

After a year's preliminary study, the New York Hospital-Cornell Medical Center established the "Comprehensive Care and Training Program" for senior medical students beginning with the academic year 1952-53(3). This plan was to provide the student with 5½ months of continuous service in one general medical clinic to which were attached consultants in all the medical specialities. The planning committee felt that in addition to this, it was imperative that the ambulant patient selected for care in this clinic should have one physician responsible for his total management and that on each of his hospital visits, the patient should come to the same familiar place and see the same familiar and friendly faces. One student was to act as family physician throughout his period of service, calling in consulting help from medical specialities where indicated, extending his services to other family members when needed, and bringing hospital services into the home when it was advantageous. The student's training was to be centered around the care of the individual patient, but would also include scheduled conferences, lectures, and seminars, as well as sufficient free time for house calls and other unplanned responsibilities. Preceptors were assigned to individual groups of 10 or 11 students for seminars which were used for case discussions or didactic teaching.

[1] Read at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

[2] Associate professor, department of psychiatry, University of Oklahoma School of Medicine and University Hospitals, Oklahoma City, Okla.

There were a number of new experiences in this program. Probably the most important was the continuity of contact between the patient and the physician for half a year. It was no longer possible for the student, after examining his patient and attaching the appropriate labels, to refer him to another clinic for treatment, and another student's work-up. The student had to plan his medical management and was forced, sometimes just by repeated contact, into an awareness of the patient's social and emotional needs. He was no longer oriented to disease, but to sick persons, and he began to know the anxieties that ordinarily occur only after he starts his own practice; and the practice of medicine is beset with anxieties.

In this situation the student began to develop attitudes which relieved his anxieties, but were against his patients' better interests. This was partly because he so commonly felt fraudulent in his masquerade as a "real doctor." The student was afraid to say, "I don't know" or to refer questions to others. He felt that the patient was being of more help to him than he to his patient. In defense he sometimes emphasized the technical aspects of his skill, becoming insensitive to or denying the existence of his patients' feelings; he became arbitrary to cover his insecurity; when bewildered by the attitude of the dependent and anxious patient, he was tempted to play the role the patient assigned to him, *i.e.*, the omnipotent father, the unquestioned authority, or the incompetent fumbler. Because of his own ambivalent attitudes toward the role of emotional factors, the conscientious student sometimes put his patient through numerous and exhaustive physical and laboratory studies, only adding to the patient's neurotic body concern. With patients who were hostile, suspicious or questioning, the student felt especially threatened. Not recognizing the psychopathology and defensive maneuvers, he saw but the confirmation of many of his own ideas about himself, his skills, and his status in the clinic.

With 45 students assigned to the clinic at a time, the course became in essence a laboratory in patient management where students began to ask more and more frequently for psychiatric consultation and supervision.

Originally a part-time psychiatrist was assigned to the Comprehensive Care Clinic to act as consultant and to take part in conferences when his time permitted. Because of the unique nature of this learning experience and its impact on the medical students, it was necessary to increase the amount of psychiatric consultation.

When, in July 1954, full-time psychiatric coverage to the clinic was arranged, it became possible to re-evaluate the needs and goals of the psychiatric teaching program and to plan a curriculum that would best reach these objectives. It is the purpose of this paper to tell the author's experience as psychiatric consultant to the Comprehensive Medical Care Program, and to define further the goals of such psychiatric teaching.

CONTENT AND METHOD OF TEACHING

Since there are psychiatric implications in the care of every patient, the program offered a unique opportunity to the psychiatrist in attendance. He had ideal teaching material: outpatients with a variety of diseases and disorders; patients in whom neurotic problems were more frequent than "psychoses"; patients in whom psychophysiological problems were common; patients who were for most purposes considered to be psychologically "normal"; and patients who were reacting emotionally to physical illness.

The traditional role of the consultant or attending physician in an outpatient clinic is to hear a presentation of the student's history and examination, see the patient briefly, and then discuss treatment. At the beginning of the program, the role assigned to the psychiatrist followed this precedent, and he was called only when the student or the regular doctor attending felt that a psychiatric opinion would be helpful. It was soon obvious, however, that such a plan was insufficient, for a large number of students did not call upon the psychiatrist, while some students became too dependent on him. Although some students were asking for supervision and guidance in their psychotherapeutic relationships with patients, others were avoiding consultation even when it was evident that the patient had an emotional problem. In the purely consultative role, the psychiatrist was not reaching all students. Provisions were made, therefore, to extend

the psychiatric teaching in 2 major ways: by weekly seminars with each group of 11 students; and by making house calls with those students who had patients on home care. These 2 methods were sufficiently rewarding to justify a more detailed report.

SEMINARS

The weekly seminars were informal sessions in which students could bring up current problems in patient management for group discussions. It was soon apparent that the psychiatrist could not depend on the student's ability to carry into general medical work the knowledge and techniques learned in the department of psychiatry during the previous 3 years. Indeed, many students who had performed well in the psychiatric outpatient department seemed unable to do as well in the medical clinic. It was as if they felt comfortable in this sphere only when the patient took the initiative by admitting psychiatric illness. Thus, it was necessary to review briefly previous instruction in basic psychopathology, dynamic structure and function of personality, reaction types, diagnostic entities, and techniques of history taking and psychological examination.

Special emphasis was placed on developing skills in interviewing, and not only eliciting but understanding the primarily vocal communications of patients. Various techniques were tried, such as didactic discussions, interviewing patients before the group and behind a one-way screen, and listening to recorded interviews, combined in each case with group discussion. Students were encouraged to give their individual attention to the patient's story in a noninterrogative way, and without the use of constricting forms or voluminous notes. The students required reassurance that it was neither possible nor desirable to get all the information at the first contact with the patient. This required a revision in many of their ideas of history-taking.

The concept of the psychological examination or mental state was difficult to get across because of the common idea that this was done only with "psychiatric" patients; yet by watching an interview and discussing what they had seen, the students were surprised at the relatively complete and informative sets of observations that were possible. Many students verbalized their fear of inquiring about suicidal thoughts in the depressed patient for fear of "putting ideas in his mind." Others hesitated to delve into the sexual history because they might get "too deeply" into an unfamiliar area in which they were anxious and insecure. They had a hard time making purely objective and descriptive observations of psychological phenomena. However, by precept and discussion they were able to learn some of the techniques for inquiring into sensitive areas with a degree of objectivity.

There was one approach to the seminars which stimulated interest and participation. This was to present the material as an exercise in problem solving. The essential data were presented to the student in mimeographed form several days prior to the seminar. One such exercise was the following:

> You are consulted by a 27-year-old, unmarried, successful attorney who complains of being rundown. He feels he should have some vitamins or a tonic to build him up. You begin to wonder what he means and what he wants built up, for he states that he has felt poorly for only 5 or 6 weeks, and that he has no other symptoms except fatigue and difficulty falling asleep. Past medical history, physical and laboratory examinations are singularly unrevealing. At your inquiry he tells of his engagement to a young woman with whom he is very much in love. As you settle back, preparing to hear the real reason why this patient consulted you, he tells at length of his relationship with his fiance, extolling her virtues. He talks of his ambitions, both socially and professionally, and how much he is looking forward to their marriage in 2 months. In response to your matter-of-fact questions about his sexual life, he breaks down in tears and shamefacedly confesses that he has attempted intercourse with his fiance on 2 occasions, but that both times, in spite of strong desire, he was unable to have an erection. In this matter he had experienced tremendous anxiety and guilt. He says, "Doctor, telling you this is the most difficult thing I've ever done. I'm so ashamed. I don't know what you'll think of me."
>
> You ask him about his past sexual experiences. He then settles down to relate his story. His parents, both now dead, were very puritanical, and he had no home instruction in sexual matters because this was taboo. His mother had made him feel that womanhood was sacred, and that sensuality was disgusting. After he had been caught masturbating at age 14, his father had upbraided him, and then warned him that no gentleman ever takes advantage of a woman. He had felt guilty about masturbation after this. In college he had revolted

and had a number of sexual affairs with women of inferior social and educational status. He achieved full physical satisfaction, but always had some guilt and anxiety that he would be found out.

When he met Mary these sexual relationships ceased. He wondered if he would enjoy sexual relationships with her as he had with others. On the occasion of his attempted intimacy with Mary, some 6 weeks ago, he felt like a seducer; Mary was somehow too good for this sort of thing. He began to worry about his own manliness and his fitness for marriage. He felt he might be diseased. He realized he was naive in many ways about sex.

With this confession and increasing confidence, he had many questions: "What is wrong with me physically that I can't have an erection?" "Is it wrong, doctor, for us to have premarital intercourse?" "Should I worry about pregnancy—can you help me on that score?" "Mary seems less anxious and guilty than I, and she seems to be less inhibited. Is that right for a woman?" "I'm also upset, although I don't know why, because she wants the lights on. Besides she asks too many questions, and I'm embarrassed."

Discussion.—Can you answer these questions? How? What is your diagnosis? What is the trouble with your patient? How do you formulate the dynamics involved? What of his relationship to you? What will you do now?

With case material such as this, discussions were enthusiastic and even the more reluctant members of the seminar group could be expected to participate. It was nearly always possible to relate the hypothetical case material to the actual patients for whom the students were responsible, but whose problems they had never discussed spontaneously. Printed case histories designed to raise certain recurrent problems in medical care were brought forth at the request of the students and ranged widely: how to organize time with patients; how to keep accurate and adequate records; how to refer a patient to a psychiatrist; the limits of the physician's responsibility; moral, ethical, legal, and religious questions.

The special advantage of a printed case history offsets one of the major problems in undergraduate psychiatric education, namely, the nature of patient material. In many medical centers students have most, if not all of their patient contacts with the indigent, poorly educated person, eking out a marginal existence in slum areas. The lives of the student's patients are so foreign to his own, and are frequently so overwhelming as to hamper any real understanding between them. It is equally true that when in practice, he will be dealing with such patients only during the time he devotes to teaching. Albeit artificial, the printed case material can bring to the student, problems much more like those he expects to meet after graduation.

HOME CARE

The home care program is essentially an extension of hospital services into the home environment. It provides an excellent opportunity to help the students understand not only the socio-economic factors which might be operative, but the dynamic interrelationships among the members of a family. One senior student requested help in the management of a 72-year-old Italian immigrant who was dying of widespread metastases from a carcinoma of the prostate. After a period of supportive and symptomatic treatment in the hospital, the patient was discharged to the home care program. It was at the request of his wife, herself a cardiac invalid, and his oldest daughter that he was returned to his home. Soon the daughter, a 35-year-old, single stenographer, approached the student physician on several occasions with complaints about the difficulty in managing the father at home; yet when questioned, she was insistent that he remain there. She said that her father had undergone a decided personality change, and was now demanding, petulant, irritable, and hostile.

Student and psychiatrist visited the home together, where examination of the patient confirmed the history given by the daughter. There was no evidence of underlying organic brain damage, and the behavioral difficulties were felt to be somehow related to the interfamilial relationships A relatively brief interview with the daughter revealed a significant area of conflict. The father and mother had come to the United States from Italy in their early twenties. They married in this country, and immediately began raising a family. There were 5 children, all of whom were married and away from home except this daughter. She revealed that, pursuant to their cultural custom, she, the oldest child, was selected at birth to remain single and in the parental home to care for the parents during their old age. She was

subsequently taught to do housework and sent to secretarial school, while her siblings engaged in an active social life preparing for marriage. She had accepted her role passively and without question, and was now fulfilling her filial obligation, although not without considerable underlying hostility and guilt, only part of which she was aware. The daughter returned to the hospital on 4 or 5 occasions to see the student in supervised psychotherapeutic interviews, during which time her father progressively improved and became much less of a management problem.

No amount of didactic instruction in the importance of social and cultural factors could have been as important as this one experience for the student.

Summary and Conclusions

The concept of a Comprehensive Care Clinic, to which consultants in the medical specialities are attached, is relatively new. The part of such programs that is unique, and has the greatest implication for medical education in general and psychiatric education in particular, is the functioning of the student as a family physician for a period (22½ weeks in the Cornell program, 32 weeks in the Oklahoma program). Such an experience probably parallels the practice of medicine as nearly as is possible during medical school. The importance of psychiatric participation in such a program is obvious and is firmly established.

Since it is so firmly established, there is no need for the psychiatrist to be apologetic about his contribution, and there is no excuse for his allowing it to become a student elective. The medical educator, regardless of his particular field of interest, has the obligation to train physicians in the best way possible. Part of this obligation is to make his subject matter palatable and attractive, but an equally important part is to see that his teaching reaches and is assimilated by all students under his charge, whether or not the individual student expects to find the subject matter interesting or worthwhile. Possibly there is a place in undergraduate psychiatric education for group psychotherapeutic experiences which are designed to break down the student's resistances, but it can in no way replace organized instruction for which students are held responsible.

It is too early to evaluate completely comprehensive care and training programs and the role such programs should play in the training of physicians. The conclusion of most of those who have participated in them is that they are training better physicians, and as a direct result of this training, leading to better and more complete medical care of patients. Where these experiences are used as a guide to future programs in other schools, it should be emphasized that full-time psychiatric participation in the planning and execution is absolutely necessary in achieving the desired goals.

The psychiatrist can function in a number of specific ways within the clinic setting. He can be available as a consultant for the individual student and his patient, and this will be an important part of his activities. In addition, the curriculum should be so organized that the psychiatrist has time and opportunity to reach all the students. Regularly scheduled seminars with small groups of students, and active participation in the home care program, in my experience are 2 of the most successful means of achieving this goal.

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BEHAVIOR SYMPTOMS IN CHILDREN AND DEGREE OF SICKNESS [1, 2]

JOHN C. GLIDEWELL, PH. D., IVAN N. MENSH, PH. D., AND MARGARET C.-L. GILDEA, M. D.[3]

In planning a comprehensive program in community mental health, the question of defining services suitable to treat certain kinds of mental illnesses in children becomes of paramount importance. Both adequacy and economy of treatment should be constantly kept in mind as checks on the program and its budget, and the constant feedback of these checks should guide the development of the various facilities. For these reasons there is need for reliable screening and a case finding method which has been adequately tested, and which could be useful in making preliminary judgments of the level of adjustment of school children. If this judgment does nothing more than select children who need further study, much will be gained.

Community mental health services may be divided into 4 types, each designed to serve children showing a different degree of disturbance: (1) An educational service to help parents deal with simple maladjustments of their children. These maladjustments show themselves in symptoms which are transient and appear in otherwise well-adjusted children in response to new problems or changes in the environment. (2) A school-centered service which offers help to parents whose children have maladjustments with more fixed and less clearly reactive symptoms, which, however, are not so severe as to disrupt either school attendance or family life. (3) The child guidance clinic which helps the parent and child with problems in which symptoms are fixed and repeated, and severe enough to threaten or break up school attendance. The family, however, remains intact. (4) Residential treatment is required for children showing problems that lead not only to school disruption, but also to the breakup of the home. These children cannot be adequately treated in school or clinic, but must go to a living-in center which offers 24-hour care (3).

Whether symptoms alone can be used as a screening tool depends on whether they can be shown to be related to the degree of clinical sickness in children. This subject has been much discussed among child psychiatrists for many years. Some child psychiatrists feel that it is dangerous to use presence or absence of symptoms as an indication of whether the child is sick or well. Gardner (5) divides children's problems into two categories, *i.e.* those requiring short-term therapy, a group which may be equated with Groups 1 and 2, and a group requiring long-term treatment, roughly equal to Groups 3 and 4. Of the former group he says that therapy aimed at relieving the symptom "will probably allow the child an extremely good chance of continuing thereafter a normal and orderly personality development." Of the latter group he warns against using absence or disappearance of symptoms as an indication for stopping treatment, or that the child can be considered well. He says, "removal of the presenting symptom may delay but not prevent the child from developing a more serious disability later in childhood or adult life." Gardner appears to doubt that symptoms themselves can be used to discriminate between sick or well children, or those with different degrees of emotional maladjustment.

On the other hand Levy (7) believes that symptoms can be used to determine sickness or health in children. He says:

> One of the findings that resulted from a series of follow-up studies starting at the Institute of Child Guidance in New York and utilizing material from about a dozen child guidance clinics . . . was that the highest correlation with general personality growth was the disappearance of the presenting symptoms. That would be a very important finding

[1] Read at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

[2] This is a report on part of a Mental Health Research Program of the St. Louis County Health Department, supported by research grant M-592 from the National Institute of Mental Health of the National Institutes of Health, United States Public Health Service.

[3] From the Washington University School of Medicine and St. Louis County Health Department. Grateful acknowledgement for their contribution is made to Dr. H. R. Domke, Mr. A. D. Buchmueller, Miss E. T. Ferrel and Mrs. Emily Schwarz.

if substantiated—that when the so-called symptoms have been removed, follow-up studies reveal that concurrently beneficial inner changes have taken place.

Witmer(10) also finds that disappearance of symptoms in children treated in a child guidance clinic correlates higher with clinical improvement than any other trait. Kanner (6) says, "the clearing up, or persistence, of the difficulties complained of may frequently, though not always, be used as a measure of the reasonableness and adequacy of the handling of the maladjustment." He lays much emphasis on the "complaint," *i.e.* the mother's statement of symptoms, as a critical factor in determining treatment.

In 1954, Eitzman(4) found, in an intensive follow-up study of 12 children treated in the St. Louis County Child Guidance Clinic, that mothers reported markedly fewer symptoms and reduced frequency after treatment than they reported at the time the child was referred. Specifically, at the time of referral, the 12 mothers reported a total of 86 current symptoms of 42 different types (mean=7.2). After treatment, these same mothers reported a total of only 40 symptoms (mean=3.3) and only 24 different types.

Although not specifically utilizing mothers' reports of symptoms, a number of studies give attention to the screening of school children for evidence of disturbance. Anderson of the Institute of Child Welfare, University of Minnesota(1, 2) is doing excellent work in screening methods developing a number of instruments which give considerable promise in differentiating children of varying degrees of "adjustment." These instruments, according to Anderson, "were designed for children with enough skill in reading to be able to comprehend the material and enough skill in writing to write something on an open-end sentence test"(2). One advantage of using the mother's report of symptoms is that it makes no demand on the reading or writing skill of the child, and can be used at any age level.

The present study was undertaken to determine whether symptoms in children, as reported by their mothers, could be used to discriminate between those in varying levels of emotional adjustment as independently determined by other means and other observers. The symptoms were compiled in an inventory which recorded not only the type of complaint, but also its severity, frequency and duration.

SAMPLES

School Sample.—This sample consisted of 91 white, public school children in 3 third grade classrooms, 1 in each of 3 schools in St. Louis County. The third grade was selected as showing relatively few transient symptoms of disturbances. Most third grade children have completed the initial behavioral adjustments to the move from home to school. At the same time they have not yet begun to make the transition to preadolescence.

Clinic Sample.—Because the school sample was nearly a typical one, normal, it contained only a few children sufficiently disturbed to require clinical treatment (n=6). Because it was so small any result might be due to some special peculiarity of the sample. To have a larger number of disturbed children, an additional 35 were drawn from children referred to the St. Louis County Child Guidance Clinic.

CRITERION GROUPS

In order to test the relationship between a mother's report of symptoms and the sickness of the child, an independent, valid assessment of degree of sickness was required. The following sections describe the method of assessing the degree of sickness.

The Assessment.—All the children in the school sample attended schools in which a psychiatric social worker had been employed for 3 years. During this time the children had been under observation of teacher and worker. In those cases in which they observed problem behavior in preliminary screening, more comprehensive diagnostic procedures were used. Where diagnostic conferences between the worker and the school personnel indicated a possibility of disturbance, the child was referred to the St. Louis County Child Guidance Clinic for diagnostic study. As a result of this screening and diagnostic procedure, it was possible to make an independent professional decision. The school sample included, as would be expected, a large number of children with

no significant mental health problems (Group 1). Teachers were asked to separate these children in 2 groups: 1a, "well adjusted," and 1b, "no significant problems." The result of this additional refinement was a gradation of 4 degrees of disturbance, not including the most severe ones requiring residential treatment (Group 4), of whom none was found in this sample.

Four Degrees of Disturbance.—The definition of the degrees of disturbance follow closely those employed in an early study by Ullman(8). (1a) Well adjusted: A child who is well adjusted in his relationships with others and in his accomplishments. (1b) No significant problems: A happy child who gets along well and accomplishes reasonably well the things that go with his age and level of development. (2) Subclinically disturbed: A child who is not so happy as he might be, with moderate difficulties in adjustment to whom growing up represents a struggle. (3) Disturbed: A child who has, or is likely to have, serious problems of adjustment and needs clinical help.

Children designated as disturbed have been so diagnosed by a psychiatric team in the Child Guidance Clinic. Those designated subclinically disturbed have been so diagnosed after at least a brief diagnostic study at school or in the clinic. Those designated as having no significant problems have shown no evidence of disturbance after 3 years' observation by the worker-teacher team. Those designated as well adjusted were so appraised on the basis of the teacher's observation.

All children in the sample of 35 drawn from clinic records had been given a diagnostic study in the clinic, and the determination of the degree of disturbance was taken from the results of these studies.

Assessment Results.—By this method of assessment, the school sample of 91 included 21 well-adjusted children (Group 1a), 39 with no significant problems (Group 1b), 25 subclinically disturbed (Group 2), and 6 disturbed (Group 3). The clinic sample of 35 children included 2 with no significant problems, 14 subclinically disturbed, and 19 disturbed.

THE INTERVIEW

The mother's report of the symptoms presented by the child was obtained by private interview in the home. The interview is used as part of a more extensive research and the symptom inventory is only one part. The mother is asked a series of questions about the demographic characteristics of the family and the family background. Next she is asked questions which constitute the symptom inventory: "Does Johnny have any trouble (sleeping, eating, getting along with other children, etc.)?" Affirmative responses are followed by probes into (1) the specific difficulty, (2) its duration, (3) frequency, (4) severity. This kind of questioning is continued through other areas of difficulty; 17 in all: digestion, getting along with grown-ups, unusual fears, nervousness, thumb sucking, overactivity, sex, daydreaming, temper tantrums, crying, lying, stealing, destructiveness, rejection of school.

FINDINGS

The data obtained have been treated by a variety of methods, taking into account the contribution of the variations in sex, age, social class, and schools from which the samples were drawn. In all treatments the findings show a stable and clear-cut positive relationship between the degree of sickness and the number, frequency, duration, and severity of the symptoms reported by the mother. The more symptoms so reported, the greater is the likelihood that the child will be found to be disturbed on clinical examination.

The findings are summarized in Fig. 1, which shows the regression line representing the relationship between the ratings of the degree of disturbance and the mean number of symptoms reported by the mother, in a sample of 126 children. As indicated in Fig. 1, mothers of children without disturbance reported, on the average, about 2 symptoms;

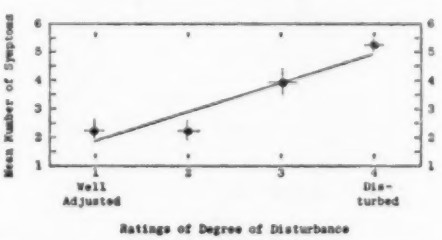

FIG. 1.—Regression of mean number of symptoms reported on degree of disturbance in the child.

mothers of subclinically disturbed children reported about 4 symptoms; and mothers of disturbed children, 6 symptoms.

RELATIONSHIP BETWEEN THE NUMBER OF SYMPTOMS REPORTED AND DEGREE OF SICKNESS

The foregoing summary of findings indicates the general nature of the relationship between the degree of sickness and the number of symptoms reported by the mother. The detailed findings permit elaboration on this relationship, first for the school sample of 91 children, and secondly for the clinic sample of 35 children.

The School Sample.—While the findings show a significant difference among the means of the number of symptoms reported by mothers in the 4 degrees of disturbance, it is important to note the range of symptoms reported by each of the 4 criterion groups. These findings are summarized in Table 1, and shown graphically in Figs. 2 through 5.

The curves in these Figures indicate the details of the relationship. These details are perhaps best summarized by observing that the peak of the curve moves consistently to the right through the 4 groups, from the well-adjusted to the disturbed group. This again shows that the more disturbed the child the more symptoms his mother reports.

These curves, along with the data in Table 1, also show the extent of variation in the symptoms presented by each of the 4 groups. There were, for example, 5 well-adjusted girls (29%) who showed 4 to 6 symptoms, or as many as the average for subclinically disturbed girls. Similarly, there were 2 disturbed boys who showed only 2 or 3 symptoms—too few to reflect the degree of dis-

TABLE 1

NUMBER OF SYMPTOMS REPORTED BY MOTHERS

(School sample of 91 children)

Degree of sickness	N	Number of symptoms reported (Percentage reporting) 0-1	2-3	4-6	7+	Total
Boys						
1a. Well-adjusted	04	75	25	00	00	100
1b. No known problems.	24	42	25	29	04	100
2. Subclinically disturbed	14	00	36	64	00	100
3. Disturbed	05	00	40	00	60	100
Total boys	47	28	30	34	08	100
Girls						
1a. Well-adjusted	17	24	47	29	00	100
1b. Without known problems	15	27	40	33	00	100
2. Subclinically disturbed	11	18	27	37	18	100
3. Disturbed	01	00	00	00	100	100
Total girls	44	22	39	32	07	100
Total sample	91	25	34	33	08	100

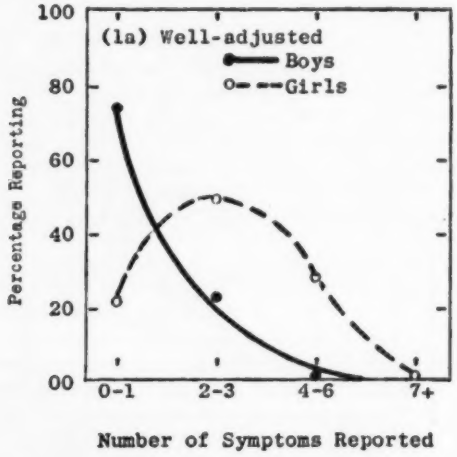

FIG. 2.—Range of symptoms reported by mothers of well-adjusted children.

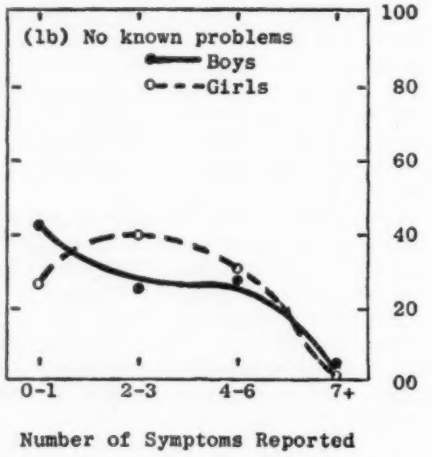

FIG. 3.—Range of symptoms reported by mothers of children without known problems.

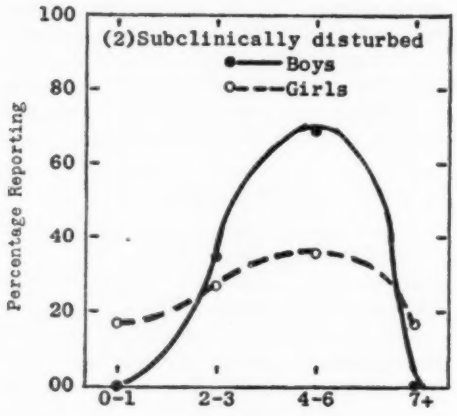

FIG. 4.—Range of symptoms reported by mothers of subclinically disturbed children.

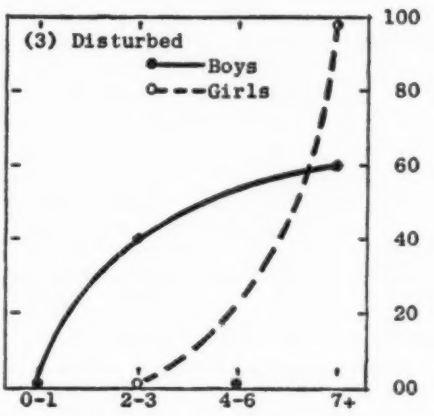

FIG. 5.—Range of symptoms reported by mothers of disturbed children.

turbance actually found. The findings for these 5 girls and 2 boys reflect the error in this screening device. The effects of the error are discussed in detail in following sections of this paper.

The Clinic Sample.—Because the school sample included only a few disturbed children (25 subclinically disturbed, 6 disturbed), an additional 35 children were drawn from the files of the St. Louis County Child Guidance Clinic. Of these, 2 were found, on clinical examination, to have no significant problems. In both cases the mother reported independently only 1 or 2 symptoms on the inventory. There were 14 children found to have subclinical disturbances, and the mothers of all but 2 reported 4 or more symptoms. There were 19 severely disturbed, and all but one of the mothers reported 4 or more symptoms. These findings show that the results obtained from the school sample were confirmed, and with reduced error.

Extent of Correlation.—The relationship between the degree of sickness in the child and the number of symptoms reported by the mother can be represented by a correlation coefficient of 0.50, shown graphically by the regression line in Fig. 1.

Reliability.—These findings show a positive and reliable relationship between the number of symptoms reported by a third-grade child's mother and the degree of sickness found in the child on clinical examination. The prediction of the degree of sickness from the mother's report has been shown to have some error (10 deviant findings out of 126), but all the differences among mean number of symptoms reported for children showing 4 degrees of disturbance were statistically significant at the 0.01 level of confidence (see Tables 2 and 3).

CONTRIBUTION OF THE FREQUENCY DURATION, AND SEVERITY OF THE SYMPTOMS REPORTED

The findings discussed have been confined to the number of symptoms reported

TABLE 2

MEAN NUMBER OF SYMPTOMS FOR BOYS AND GIRLS WITH FOUR DEGREES OF DISTURBANCE

	School sample of 91			School plus clinic sample of 126		
Degree of disturbance	Boys	Girls	Total	Boys	Girls	Total
1a. Well-adjusted	1.5	2.6	2.3	1.5	2.6	2.3
1b. Without known problems	2.2	2.5	2.3	2.2	2.4	2.2
2. Subclinically disturbed	4.0	3.3	3.6	4.1	3.5	3.9
3. Disturbed	5.3	7.4	5.6	5.1	6.4	5.6
Grand means ..	2.9	2.8	2.8	3.3	3.2	3.3

TABLE 3

ANALYSIS OF VARIANCE FOR TOTAL NUMBER OF SYMPTOMS REPORTED

(Log transformation; corrected for disproportionality)

Source of variance	Degrees of freedom	Sum of squares	Mean squares	F	p
Sample of 91					
Degree of disturbance	3	0.59946	0.19981	5.63	.01
Sex	1	0.00941	0.00941	—	ns*
Interaction	3	0.08778	0.02920	—	ns
Residual	83	2.95133	0.03550	—	—
Sample of 126					
Degree of disturbance	3	1.46205	0.48735	13.908	.001
Sex	1	0.01258	0.12580	3.590	ns
Interaction	3	0.10397	0.03465	—	—
Residual	118	4.13573	0.03504	—	—

* Not significant.

by the mother without regard to her report of their frequency, duration, or severity. The data were treated so that a score was derived for each symptom reported. The score was a composite of 3 ratings by the mother: one for frequency, one for duration, and one for the severity of the symptom. The scores for each of the 17 symptoms were then added to yield a total for the entire symptom inventory. This total took account of the frequency, duration, and severity of the symptoms as reported by the mother. These totals were then given the same treatment as the number of symptoms reported, and the results were compared to determine if there was an increase in the sensitivity of the symptom inventory as an index of disturbance.

When the frequency, duration and severity of the symptoms reported by the mother were thus taken into account, the resulting symptom inventory scores provided a more sensitive differentiation of disturbance in third-grade children than did the simple count of the number of symptoms.

Differentiating Power of Individual Symptom Areas.—It was found that each of the 17 symptoms was reported more often for disturbed than for undisturbed children, although not always significant at the 0.05 level of confidence. The symptoms which appeared significantly more often in the disturbed boys were: sleeping trouble, trouble getting along with other children, nervousness, unusual fears, and stealing. Those symptoms which appeared significantly more often in the disturbed girls were: sleeping trouble, lying, and making a fuss about going to school.

DISCUSSION

The foregoing sections present data to confirm the hypothesis that a symptom inventory can be used for screening children for psychiatric difficulties. The findings show a reliable and positive relationship between the number, frequency, duration, and severity of symptoms reported by a child's mother and the degree of disturbance found in the third grade child. They also show that prediction of disturbance from the mother's report is imperfect. The discussion of these findings is best stated in terms of the actual degree of success one would have had in predicting disturbance in these children from the reports of symptoms by the mother.

There are essentially 3 types of screening objectives for such an instrument as this symptom inventory: (1) prediction of *both* the presence and the absence of disturbance; (2) prediction of the *presence* of disturbance in the child—when can one be most sure that he is disturbed? (3) prediction of the *absence* of disturbance—when can one be most sure that the child needs no psychiatric attention? The success in achieving each of these objectives is discussed below.

Maximum Success.—If one wishes to maximize the success in predicting both presence and absence of disturbance, one must set a critical score near the middle of the range. In this case one would set the critical score at 4 symptoms. If the mother reports 4 or more symptoms, one would predict disturbance; if the mother reports fewer symptoms, one would predict no disturbance. Applied to these data, such predictions would lead to 12 false positives, 18 false negatives, and 61 correct predictions, or a 67% success predicting both presence and absence of disturbance.

Predicting Presence of Disturbance.—If one wished to be sure that a child was disturbed, he would select a cutting point near the high end of the scale. In this case success would be measured in terms of the num-

ber of false positives, or the number of times the children selected were found, in fact, not to be disturbed. In such a case, one would set the critical score at 7 symptoms, and he would predict that all children whose mothers report 7 or more symptoms will be disturbed. Applied to the school sample, such a prediction would lead to 1 false positive in 7, or about 86% success.

Predicting Absence of Disturbance.—If one wished to be sure that a child was not disturbed, he would select a cutting point near the low end of the scale. In this case success would be measured in terms of the number of false negatives, or the number of disturbed children not included in the group screened as possibly disturbed. In such a case, one would set the critical score at 2 symptoms, and he would predict that all children whose mothers report fewer than 2 symptoms were clear of disturbance and need not be examined further. Applied to the school sample, such a prediction would lead to 2 false negatives in a total of 23, or about 91% success.

A second measure of success by this last method, the most typical of public health activities, is the percentage of actually disturbed children who are "missed," or not included in the group screened as needing further examination. Applied to the school sample, this prediction would result in the omission of 2 in 31 disturbed children, or about 93% success.

Summary

Data have been presented to show that, in a sample of 91 school children and a sample of 35 clinic cases, a reliable, positive relationship exists between the number, frequency, duration, and severity of the symptoms reported by a child's mother and the degree of sickness found in the child. The relationship permits one to use the mother's report as a screening instrument with more success than with most medical screening techniques.

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NEUROPSYCHIATRIC ASPECTS OF ACUTE POLIOMYELITIS [1, 2]

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The epidemic of poliomyelitis in Boston in 1955 provided an opportunity for extensive studies of the course of this disease. Unusual psychological phenomena which occurred in acutely ill patients were quickly brought to the attention of the psychiatric staff at the Massachusetts General Hospital. A cursory survey of the literature disclosed few clinical studies of the neuropsychiatric aspects of acute poliomyelitis(1, 2, 3, 4). This study was designed, therefore, to investigate the delirium observed in several patients, the psychological impact of an acute and crippling illness, and the possible role of a psychiatrist in the management of this disease.

MATERIAL AND METHODS

One hundred and eight hospitalized adult patients were interviewed. Of these, 46 were in respirators, and they were interviewed repeatedly for periods up to 6 weeks. Of the remaining 62 nonrespirator patients, 48 suffered from varying degrees of paralytic poliomyelitis and 14 had nonparalytic poliomyelitis. The 62 patients in the nonrespirator group were interviewed only once unless there was therapeutic reason for additional interviews. The age range of the patients was from 15 to 58 years, and 78 percent were between the ages of 20 and 35.

The interview technique was modified, when necessary, to comply with the severity of the illness. The interviews, one-half to 1 hour in length, included a description of mental status: general behavior, stream of thought, mood, content of thought, orientation, memory, insight, and judgment. They also included a brief social history and an attempt to assess the patient's emotional response to his illness. It soon became apparent, however, that it was necessary to modify this technique for the respirator patients. Interviews were usually limited to 5 to 15 minutes. The psychiatrist wore a mask, and in those cases where a tracheostomy had been performed it was necessary for the interviewer to cover the end of the tube with his finger to enable the patient to speak. The only way the sick person could see the psychiatrist was through the mirror at the head of the respirator. Even these brief interviews were frequently interrupted by mechanical aspiration of the tracheostomy tube, adjustments inside the respirator, and by rapid fatigue of the patient. Although the interviews were brief, they were sufficient to establish the presence or absence of delirium, to assess the patient's psychological reaction to the respirator, and to approximate his mood. When delirium was present, disorientation, confusion, thought content, mood and sensorium were described as well as possible. When a patient's physical and mental state permitted, interviews were allowed to become psychotherapeutic. The investigation of most respirator patients included some contact with persons who were close to them. Relatives, nurses, physicians, and clergymen were interviewed. Throughout this study the same 2 psychiatrists conducted the interviews. The first few patients were interviewed by both together in order to assure a similar interview technique in this unusual situation.

OBSERVATIONS

Delirium.—In 17 patients we observed a transient delirium. Of these, 15 patients were in respirators. One patient had bulbar signs but was not placed in a respirator, and another developed his delirium before a respirator was used. All patients were in the acute febrile phase of poliomyelitis at the onset of the delirium, and all showed neurological signs of bulbar or bulbospinal involvement. The delirium occurred early in the hospital

[1] Read at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

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course, varying from the first to the 11th day after admission. In the 15 deliria observed after confinement in a respirator, onset was on the first to the 10th respirator day. In 2 cases, the delirium and confusion were part of a steady downhill course leading to coma and death. Seven patients became comatose, but recovered. Three of these had severe but short episodes of hypoxia caused by retention of tracheo-bronchial secretions or by mechanical failure of the respirator. Eight patients never became comatose. We were usually able to fix the time of onset of delirium within a matter of hours, but inasmuch as the sensorium cleared gradually the exact duration of the delirial state was difficult to determine and has been arbitrarily chosen. It appeared to vary in length from as short as 5 days to as long as 6 weeks; the average time was about 2 weeks. In general, the delirium disappeared at the time the patient became afebrile, or shortly thereafter.

Delirious patients showed a fluctuating level of consciousness from one interview to another and even within the course of a single short interview. At times they were clear, alert, and oriented; at other times incoherent, drowsy, and confused. Restlessness and excitement were occasionally observed. The span of attention was short and both recent and remote memory was often grossly impaired. Two patients had a history of gross psychiatric difficulties prior to their attack of poliomyelitis, but no qualitative differences could be noted between their delirium and that of the other 15.

Thought content was frequently related to sounds and objects of the environment which were misidentified and falsely interpreted. At times frank delusions and visual hallucinations appeared; a subtle shading between illusions, delusions and hallucinations made classification difficult. The delusions and hallucinations were usually concerned with pleasurable experiences, such as being at home, riding in an automobile or plane, or taking a boat trip. They frequently involved motion of some type. An occasional patient took his respirator with him on his imaginary flights. Sometimes a patient described his hallucinations as if they were vivid dreams which he recognized as such, but at other times they were entirely real to him. Such hallucinatory experiences seemed to be enjoyable rather than disturbing and were accompanied by a pleasurable affect. They occurred most frequently at night but also at other times when the patient was falling asleep.

A few patients, at one time or another, had frightening illusions or hallucinations. We also observed occasional evidence of anxiety, apprehension, fear of being harmed, and accusatory attitudes toward the ward personnel, sometimes of blatantly paranoid nature. All patients who survived their illness recovered from the delirium. Gradually they had fewer imaginary experiences and progressively longer periods of lucidity until a sustained normal mental status was restored. As patients improved, however, many exhibited concern over their "strange behavior," which they recalled vividly, and expressed fears of "losing their minds."

A clinical picture of the delirium is illustrated by the following cases:

Case 35.—B.D., a 34-year-old white married engineer, the father of 4, entered the Massachusetts General Hospital on August 7, 1955, with paralytic poliomyelitis. One day before admission he complained of headache, backache, and abdominal distress. On the day of admission, his family physician had discovered a stiff neck. At that time the patient complained of frontal headache, photophobia, intense low back pain, chills and fever. The cerebrospinal fluid contained 240 white cells. By afternoon of the day of admission he had developed intercostal, diaphragmatic, and bilateral leg and arm weakness. He was placed in a respirator and a tracheostomy was performed. Intravenous fluids were given and a nasogastric tube was inserted. The patient was hypotensive for 2 days and levarterenol (Levophed ®) was administered. Five days after admission, he was oriented and alert. He was still febrile (101° to 102°) and his medical prognosis was considered poor. He was first seen by one of us (R. C.) on the 11th day of hospitalization. The nurses' notes revealed that he had fluctuated between being unresponsive and being rational and clear during his second hospital week. In an interview lasting 15 minutes, the patient was cooperative in explaining that he had been "hallucinating." He talked about driving his family to a friend's house at the beach, and stated that he always drove to places "out of the hospital." He said that he knew these thoughts were absurd, "but still I go." He said that this had been occurring 2-3 times a day but now only once a day. Memory of recent events was vague. He reported that he was cheerful most of the time and that "prospects looked good." When he came in he was "quite sick," but now was "better" and all would "turn out right in the end." He

pictured himself leaving the respirator, going to work, or sitting by the fireplace at home. Twice he talked of buying a convertible and driving through the Connecticut countryside. On one of these occasions, he told the examiner that he had just had a 2-hour ride in his new convertible and that it was too bad that he had come too late for the ride; yet he distinctly recognized these as dreams when questioned about them. On several occasions he talked about nurses "neglecting me and making things miserable for me."

From the time he was first seen until a month later, he was intermittently confused and disoriented with a short attention span, alternating with clear and lucid periods. The disorientation and confusion were much worse in the evenings, when he expressed considerable anxiety about the "peculiarly vivid thoughts" he could summon up by merely closing his eyes. "I'm not asleep, and yet the thoughts are so vivid they are like dreams." At no time during the first month of his illness was he depressed, but later he talked of being "discouraged" and said "I wonder if I will ever get out of here."

The patient was given psychotherapy for several weeks after the study and was still in the respirator 9 months later.

Case 42.—M.Y., a 31-year-old white married steel mill superintendent, was transferred to the Massachusetts General Hospital on August 31, 1955, in a portable respirator because of poliomyelitis. Three days before admission he had complained of headache, backache, and malaise. The following day he was febrile with nausea, vomiting, and nuchal rigidity. On the day of admission, he was unable to cough, sit up, or move his legs. His history included hypertension (230/130) without known renal disease. He described himself as "nervous" all his life. When seen by one of us (J.H.) on the day of admission, he was alert, clear, and oriented. He talked about his recent difficulty in breathing and said that he was relieved to be in the respirator. He did not feel depressed and felt sure that he would recover.

The next interview a day later showed a different person: he was disoriented, confused, agitated and pleading for the examiner to open the machine and let him out. For several days his delirium alternated with temporary periods of lucidity. There were no signs of anoxia, although he was febrile and clinically toxic. On one occasion he said that he was in a portable respirator and that he was in a car enroute to the Massachusetts State Hospital because of poliomyelitis. He felt he was in a garage along the way and had stopped there because it was the nurse's day off. He complained about his care and the poor treatment he received. During one interview, he believed he was on a boat, while in another he thought he was in New York City with his brother. He did not recognize his wife and felt that he had been abandoned by his family.

Shortly thereafter he became even more seriously ill and required a tracheotomy; only after 10 days could interviews be resumed. He then vaguely recalled having been very sick, remembered the "silly ideas" he had told the examiner, but felt that they no longer concerned him. He made steady progress, remained in good spirits, and after a period on the rocking bed, was able to breathe without the respirator. He continued to improve physically and maintained an optimistic attitude toward his illness.

Case 15.—R.H., a 29-year-old married mental hospital attendant, was admitted on August 15, 1955, with a diagnosis of acute spinal poliomyelitis. The illness began 4 days before admission when he developed malaise, diarrhea, fever, headache, and generalized pains. These progressed until the day of admission when he had nausea and vomiting, weakness of his right leg, and inability to void. The following day the patient developed further leg weakness, intercostal muscle paralysis and abdominal respirations. By that night he had developed a temperature of 102°, and poor diaphragmatic excursions although he could still swallow and had no pharyngeal puddling. His vital capacity had dropped from 1,200 cc. to 700 cc. (normal: 3,500-4,500 cc). He was placed in a respirator; 3 days later he was considered well enough to spend brief periods out of it. On the 6th hospital day, however, because of respiratory difficulty from rapid bulbar extension of the disease, a tracheotomy was performed. The patient was cooperative and talkative on his 10th hospital day when first interviewed psychiatrically. He discussed the "dreams" he was having which "are so clear I think they're happening, but I know they couldn't be." He said that the dreams always took him away from the hospital, usually to some place with his family. At one point he felt he was in an airplane flying down to Connecticut "for a cut-down for intravenous fluids." At times he described these "dreams" as having happened, while at other times he experienced them even as he was talking. On several occasions he became very angry with his wife and asked her to leave because he felt that she was in some way against him. Once he believed he had been discharged, only later realizing he was still in the respirator. On the 13th day, while still toxic, he thought that he was at work in the operating room. By the 20th day he was lucid for longer periods although his memory of recent events was unclear. Because of his previous psychiatric experience, he became interested in talking with the examiner and discussed other patients who were "out in left field." He stated that things had been "hazy and confused" but were now clear; and "it all seems like a dream and I must have been delirious." At this time he showed marked emotional lability, with rapid alternation between quick tears and cheerfulness. Within 2 weeks, however, he recovered from this phase, becoming his usual cheerful self again.

PSYCHOLOGICAL RESPONSE TO ILLNESS

The severity of poliomyelitis varied from barely perceptible clinical symptoms to severe and crippling paralysis, including in some patients the loss of ability to breathe unaided. Three types of patients thus presented them-

selves: (1) those in respirators, (2) those paralyzed but not in respirators, and (3) those without paralysis.

Response of Respirator Patients.—One of the most striking things noted in the first few weeks of interviewing respirator patients was the extraordinary cheerfulness of these critically ill persons. When we approached them, they usually smiled and began discussing events of the past 24 hours, new symptoms which may have developed, or how they had felt the previous day. They never expressed recognition of the obvious seriousness of their condition; indeed, they seemed unable to accept it. We found no patient in the respirator group, early in the course and when not in delirium, who did not feel strongly that he would continue on a steady uphill course. Only 2, both in their 50's, even discussed the possibility that they might not recover. The denial of major illness and possible death became defiant if threatened by an inadvertent allusion to the serious or chronic nature of poliomyelitis. At times the denial of paralysis was so marked that patients talked with complete unrealism of getting out of the respirator in a day or two or of going home within a week. They sometimes cheerfully talked of their paralysis or respiratory distress, and then quickly added that they would shortly be well.

Concern was centered on life in the respirator from minute to minute. Concepts of home and time became unimportant. Attention was directed to such events as suctioning of secretions or of having their limbs moved to more comfortable positions by nurses. The patients thought continually about breathing and continuing to breathe, and tremendous anxiety resulted from any difficulty with the respirator or lack of quick attention to possible distress. All patients exhibited anxiety upon being put in the respirator. This was a universal, transient phenomenon, but it appeared to be of greater intensity among those who were either put in without emergency indications or among those with previous personality problems. In contrast, those in extreme respiratory distress experienced immediate relief upon being placed in the respirator with considerably less anxiety.

Once adjusted to the respirator, patients consistently showed psychological dependence upon it. This created a substantial problem when patients were medically ready for removal. At that time they required repeated reassurance as the time intervals outside were gradually increased. The psychological "weaning" of a patient from his respirator was facilitated by the use of new equipment such as the rocking bed which became a helpful intermediate step between the respirator and independent breathing.

As time passed the mechanism of denial used early in the acute illness was challenged by the chronicity of the paralysis. Patients frequently became discouraged and tearful with repeated requests for reassurance from the staff. Discouragement occurred predominantly in the evenings when sleep was often difficult. Many patients required attention far beyond conceivable physical need, which at times constituted frank regression. Some requests for help were unreasonable, such as asking for the constant attendance of a favored member of the staff. Although all respirator patients were at some time mildly regressed, occasional episodes of grossly childlike and querulous behavior were seen. Finally, in addition to denial and regression, we often heard such rationalizations as "others are much worse than I" and "I will appreciate life so much better when I am well again."

These psychological phenomena in the respirator patients are illustrated in part by the following cases.

Case 16.—R.T., a 30-year-old salesman, was admitted to the Massachusetts General Hospital on August 11, 1955, with spinal poliomyelitis, and was placed in a respirator 2 days later. On the 5th hospital day a tracheostomy was done when bulbar signs developed. He was first interviewed by one of us (J.H.) on the 14th hospital day at which time he related that he was not afraid of going into the respirator but had worried about air which escaped around the collar. The staff was unable to repair this for some time. He experienced much respiratory distress and had a continual fear of its repetition. He described the utterly helpless feeling of being totally unable to move and even unable to speak unless someone put a finger over the tracheostomy tube. He told of one frightening night when he was unable to call the nurse because she did not know that occlusion of the tracheostomy was necessary. He talked cheerfully of his family and his job and was quite confident of eventual return to work. He hardly seemed to care about the body paralysis and was mostly concerned about return of enough respiratory function to leave the

respirator. He declared that time was very unimportant and that he was "not worried about something to occupy my mind." He had several medical complications which resulted in some temporary "blue periods" but his general optimistic outlook and assurance that he would soon be well persisted. He later demonstrated the use of portable respirators to new patients, and his cheerfulness and encouragement were a source of support to others.

Case 21.—D.C., a 23-year-old unmarried Mormon missionary, was placed in a respirator on September 1, 1955, because of rapidly progressing bulbospinal poliomyelitis. When seen by an examiner (R.C.) the following day, she was alert, smiling, and talkative, and stated a strong dependence on her religion for "keeping me cheerful through it all." She was not depressed and was confident that being in a respirator was "only a phase." There were no signs of a delirious state. Although her condition was precarious for over a week, each day she would tell the examiner, "I am nearer to getting better." She would smilingly and repeatedly talk about the most morbid aspects of her disease with no evidence of sadness or fear. On one occasion she told the examiner. "My lungs are dead, but it is only a matter of time and prayer." Over a 6-week period, her physical state remained unimproved, but her buoyant spirits persisted. On several occasions, the patient remarked how fortunate she was to be less seriously ill than others. On later visits, although she had made no progress toward recovery from the severe muscular and respiratory paralysis, she was still firmly confident of eventual full return to health.

Response of Paralytic Patients.—A variety of psychological mechanisms were observed in patients with paralytic disease. Of the 48 paralyzed nonrespirator patients seen, well over half demonstrated rationalization and denial. Rationalization was evidenced by: "This has been an interesting and valuable experience," or "I am lucky now to have immunity." Denial was stated in phrases like: "Though my legs are paralyzed today, I expect to be back to work soon." Patients who obviously would require crutches and braces to walk talked of being up and about and of returning to work in the near future. At the time they seemed unable to accept a more realistic view of their disability. Some patients described their paralysis as "minimal" or "very slight" in definite contradiction to their true status. In many of them, however, crying and signs of depression occurred when the first attempts at physiotherapy forced them to recognize the reality and extent of their paralysis. Despite repeated requests for reassurance early, patients often became angry with their doctors later, for what they then felt had been deception about the eventual outcome of their paralysis. Many patients made references to the illogical and whimsical vagaries of Fate, with lamentations such as "Why did this have to happen to me?", "What did I do to deserve this?", and "Bad things always happen to me."

In the paralyzed group, evidence of psychological regression was most frequent in those who were severely paralyzed. One young woman who had been transiently in a respirator said on several occasions, "I'd rather be upstairs in a respirator where I got more attention." Another woman with severe bilateral leg paralysis, a formerly self-sufficient instructor of physical education, quickly regressed to a demanding, petulant individual who threw objects at the nurses during temper tantrums. In some cases, by contrast, the disease was looked upon as a challenge. Frequent references were made to "licking polio" and "fighting the disease," as if the acute course of the illness could be altered by strong exercise of will.

Response of Nonparalytic Patients.—Patients with nonparalytic poliomyelitis were not severely ill medically and showed no evidence of delirium, denial, rationalization or regression. Nonparalyzed patients who were seen early in their illness were anxious and apprehensive about the future course of their disease. They knew they were on a special ward for poliomyelitis where others about them were developing paralysis or respiratory distress. Symptoms and possible outcomes of poliomyelitis were frequent topics of newspaper articles and conversations among the public, and information about poliomyelitis became common knowledge during the epidemic. The dread and fear generally present in unafflicted people in the community were intensified in the patient whose condition might change rapidly, whose outcome was uncertain.

Some patients, whose poliomyelitis at no time resulted in paralysis, and who left the hospital essentially well, were interviewed just before discharge. They were exuberant and happy about their recovery without paralysis. They considered themselves fortu-

nate to have escaped more severe manifestations and residua.

Discussion

DELIRIUM

The transient delirium observed in the 17 patients with bulbar or bulbospinal poliomyelitis presented a strikingly uniform picture. It occurred in such seriously ill patients that they might not have survived without the recent scientific knowledge available, and the expertness of the medical care they received. The paucity of earlier reports of a delirium in poliomyelitis may reflect this fact. Some had, in addition to spinal and bulbar signs and delirium, coma and convulsions, indicating extensive and diffuse involvement of the nervous system. We shall consider the delirium apart from this larger clinical picture.

The delirium was not unlike that described in several other neuropsychiatric conditions. Withdrawal from barbiturates, bromide intoxication, alcoholic hallucinosis, and the encephalitic picture associated with certain poisons and toxins have been described to produce similar clinical pictures. Confusion, a clouded sensorium, and hallucinatory experiences similar to those described in the case presentations are common to deliria resulting from various etiologies. In the delirium we observed, the imaginary experiences at times appeared to be hallucinations, at other times delusions or illusions. Several salient features, nonetheless, seemed typical of this particular delirium. Patients usually had a clear memory of their imaginary experiences and within minutes could explain with clarity and insight that a "dream" had occurred. The experiences were usually pleasurable and nonfrightening. The sensation of motion was common. The term "traveling psychosis" arose from the frequent automobile, plane, and boat trips on which patients thought they embarked. We suggest the possibility that in his toxic state, a patient might misinterpret the constant whir of the respirator motor accompanied by the rhythmic motion of the air about his body as a sensation similar to riding in some type of vehicle. At times the illusory quality was even more pronounced when a patient incorporated parts of the respirator into the travel dream. We are impressed that previous personality apparently did not bear a relation to the occurrence of the delirium. Indeed, recovery was complete in all patients who survived.

In 1884, Strümpell used the term polioencephalitis for what is generally conceded to be the initial description of bulbar poliomyelitis(5). Previously, poliomyelitis had been recognized as a disease of the spinal cord only. Since then, neuropathological studies have indicated that nearly every part of the central nervous system can be damaged. Patchy lesions of medulla, pons, cerebellum, mesencephalon, diencephalon and cerebrum, in addition to lesions of the spinal cord, have been noted in histologic studies (3, 6, 7, 8, 9).

It is appropriate in a diffuse disease of the central nervous system to attempt correlation of known pathological lesions with the occurrence of particular symptomatic manifestations, *e.g.* delirium. Lesions of the cerebral cortex are usually inconspicuous except for the precentral gyrus which may be extensively involved. No constant lesions of any other cerebral areas have been described. Lesions of the diencephalon, particularly the hypothalamus, have been reported in as high as 85% of cases of bulbar poliomyelitis(8). The occurrence of disordered sleep patterns, gastrointestinal disturbances, and alterations of blood pressure and temperature as probable clinical representation of hypothalamic lesions lend substance to the possibility that emotional instability could also be associated with lesions of this area. Involvement of the midbrain was found in all 111 autopsied patients who died of bulbar poliomyelitis in the Minnesota epidemic of 1946(9). Lesions of this area from other causes have a demonstrated association with delirium: Wernicke's hallucinosis and in some instances, barbiturate intoxication or withdrawal. L'Hermitte has reported cases of hallucinosis related to occlusive vascular lesions of the mid-brain which he called peduncular hallucinosis(10, 11). These patients described pleasant dream-like visual hallucinations into which they had insight. Though his conclusions have been questioned, the clinical phenomenon he described resembles that seen in the deliria of our patients with poliomyelitis. In addition, however, we noted confusion, dis-

orientation, and an altered state of consciousness. The association of clinically recognizable bulbar dysfunction in each of our patients with delirium supports, by anatomical proximity, the possibility that pathological lesions of the brain stem may be causally related to the delirium, though it is impossible to delimit a particular area. Pathological studies of the brains of several patients in this report are in progress(12).

The presence of fever, at times of hypoxia, and the effects of medications are additional recognizable factors which might have been etiologically related to the delirium. Deliria occasionally occur during febrile states accompanying other systemic infections. Though clinically these patients did not show more than transitory bouts of hypoxia, unrecognized or sub-clinical hypoxia and even hyperventilation in the respirator must be considered as potentially having occurred. Though drug administration was kept to a minimum, sedatives were occasionally given in small doses.

Purely psychological factors which could account for delirium in the absence of any specific brain lesion must be considered. The work of Hebb and his group(13, 14) which demonstrated that isolation of normal individuals under special conditions can produce psychotic states has been considered by others to be relevant to the genesis of the deliria seen in respirator patients with poliomyelitis (15). Serious illness in a respirator imposes great stress on an individual. Perhaps this stress might have produced a psychotic-like state in some of our patients. For the most part, our patients had motor paralysis or paresis from the neck down; their sensory perception was, however, completely intact. They complained frequently of pain and discomfort. They were not isolated. They were spoken to every half hour by a polio team physician during their critical stage. Twenty-four hour lights, nursing activities, and ward noises produced environmental stimulation. This marked difference from the experimental environment created by Hebb where deprivation of visual and tactile stimulation are essential leaves few similarities with which to support a pathogenesis by analogy.

PSYCHOLOGICAL RESPONSE TO ILLNESS

Denial was the one psychological mechanism seen in the vast majority of paralyzed patients which appeared to bear a direct relationship to the severity of illness. Denial was not seen among non-paralyzed patients. We may speculate that there was little need for such a mechanism in these patients, since most of them were not severely ill. In this study it seemed that overwhelming illness was requisite for use of the mechanism of denial. Denial was a universal reaction in the respirator patients, and became pervasive enough to convey a sense of cheerfulness and confidence at startling variance with the distressing medical facts.

Rationalization, like denial, was seen in many patients, but seemed to be a less rigid and less extensive mechanism. It was particularly common among patients who were not seriously ill. It is of interest that 2 severely ill respirator patients used little denial or rationalization. Each talked intermittently about the possibility of death and the actual severity of his illness. They were the 2 oldest patients in the series, a man and a woman, each over 50.

Certain differences in psychological reactions between the patients in respirators and those with paralytic poliomyelitis who were not in respirators were particularly noteworthy. Whereas the paralytic patients were able to indulge in long range planning, those in respirators concerned themselves with immediate needs and desires. When asked what they thought about, they replied in terms of respirator care, suctioning of the tracheostomy tube, and maintenance of respiratory function. To these patients life had become dependent upon a mechanical device; cessation of its function would entail immediate death. The integrity of the electric circuits, the presence and competence of nursing personnel, and the efficiency of the respirator loomed as the very links between them and life. And, indeed, these links were often realistically threatened. In several cases, for example, electric plugs accidentally were kicked out of sockets, or portholes were left open. In either situation it might have been impossible for the patient to summon help

in time. Such experiences led to overwhelming anxiety, fear, and dread of repetition. Moreover, the emotional impact of repeated hurricane warnings, common at that time in Boston, was considerable because of the possible threat to electric power.

From their first encounter with it, the respirator presents a special problem to patients which is usually marked with anxiety. Here were people whose increasing respiratory distress demanded their adjustment to a fearsome mechanical device, with its attendant implications of critical illness, that they might be given an external force for life's breath itself. Once adjusted to the respirator, however, psychological dependence upon it became marked, often in excess of the actual physical need. Such need for this machine appeared to corroborate Seidenfeld's observation of the similarity to an addictive process(16). It was necessary to plan gradual removal from the respirator, despite good respiratory function, because of a patient's fear of relying solely upon his own breathing. Patients frequently were alarmed during the first few minutes out of the respirator and had to be constantly reassured that they were breathing adequately. As might be expected, complete dependence upon external forces for breathing, eating, elimination and the maintenance of life fostered childlike regression in some patients.

Sustained depression was not consistently observed in any of the respirator patients, but depressive symptoms did occur transiently in the evenings. We believe this may be interpreted as a temporary breakdown of the denial mechanism. In marked contrast to these occasional periods of gloom was the more profound depression seen in the paralytic non-respirator cases which occurred much earlier in their illness. Often it was related to the start of physiotherapy and the consequent necessity to recognize and accept their actual disability. Here, depression might have been an intermediate stage in the progression from denial to adjustment to the disability. Later, in the rehabilitative phase and thereafter, it seems that previous personality determines each patient's lasting response to his disease(17).

ROLE OF THE PSYCHIATRIST

In this study of 108 patients of varying socioeconomic backgrounds, we were surprised by the absence of negative attitudes towards being seen by a psychiatrist. Many patients enthusiastically welcomed our visits. Interviews offered them an opportunity to express their fears and anxieties. They were unable to express these feelings to their families or to a medical and nursing staff with little time to listen. A real need existed for a person with whom they could discuss the emotional impact of their illness. Although consultation regarding serious psychiatric problems in a few patients helped to initiate this investigation, it soon became clear that the majority of patients had substantial emotional problems related to the illness legitimately within the purview of a psychiatrist. With a psychiatrist on a hospital polio team certain predictable difficulties in treatment, management, and rehabilitation were anticipated, and in some cases, expeditiously handled. In addition, psychiatric consultation with the families, in some instances, helped them to adjust to the serious illness and long rehabilitation of their relatives.

The polio nurse requires training in the special emotional problems involved in the care of these patients, and this is best provided by a psychiatrist working with the team. Finally, arrangement of respirators in compatible social groupings so that patients can maintain each other's morale might best be done by a participating psychiatrist.

Summary and Conclusions

1. A neuropsychiatric study of 108 hospitalized patients with acute poliomyelitis was made during the Boston epidemic of 1955. Of these, 46 patients were in respirators, 48 had paralytic poliomyelitis not requiring a respirator, and 14 had non-paralytic poliomyelitis.

2. A delirium was observed in 17 patients who were acutely ill with bulbar or bulbospinal poliomyelitis. This delirium was characterized clinically by a varying level of consciousness, pleasurable hallucinatory experiences and frequent illusions and delusions. There was waxing and waning of disorienta-

tion and confusion with a shortened attention span. Imaginary experiences were often described by patients as "wakeful" or "vivid dreams." The delirium occurred with the acute toxic phase of illness and lasted an average of two weeks followed by complete recovery in those patients who survived.

3. Psychological responses to acute poliomyelitis were studied in an attempt to delineate specific mechanisms involved. Rationalization, denial, and regression were often observed and have been described. The occurrence of anxiety and depression at various stages of the disease is noted and discussed.

4. The role of a psychiatrist as part of a hospital polio team is emphasized(5).

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DISCUSSION

JOSEPH S. BIERMAN, M. D. (Baltimore, Md.)—Acute, major, and crippling diseases have been intensively studied from the medical and physiological point of view, with only very little attention until recently to the psychological impact of the sudden physical traumata. Antibody response and pleocytosis of the spinal fluid are thought of as immediate defensive reactions of the body to the invasion by the poliomyelitis virus, but, as Drs. Holland and Coles have demonstrated, the affected patients have other defensive reactions on an ego level that are probably just as necessary for survival.

The large number of patients studied, representing different types and degrees of severity of poliomyelitic involvement, afforded a good opportunity which the authors capitalized on quite successfully for comparative observations concerning the use of denial as a defensive reaction in the acute stage of the illness.

Denial is an ego defense mechanism designed to ward off or change an unpleasant or painful external reality. The use of denial by fantasy, words, or acts is accepted as something quite necessary and appropriate for the very young child. This, of course, is not true for the adult who, when he denies the obvious, is immediately considered to be at least unrealistic. But perhaps the poliomyelitic adult *needs* to be, since reality here, as represented by motor paralysis or imminent death from respiratory failure, may be too overwhelming. Overwhelming in what way? What would happen if the use of denial were not possible; what purpose does denial serve? The authors have speculated that depression is the intermediate phase between denial and acceptance of the illness. Perhaps another possibility is that denial is, in a manner, a defense against the depression which may come all at once if the illness and its implications were accepted and allowed rapidly to lower the self-esteem of the patient. Denial would defend against depression by nullifying the loss of self-esteem.

One very interesting finding was the difference in the degree of denial used by respirator and nonrespirator paralytic cases. The respirator patients had a denial in affect also, as evidenced by their unexpected cheerfulness. The denial seems to be more complete. It seems permissible to speculate that the denial in affect is a defense against an underlying depression. The more immediate and everpresent threat of a respiratory death may make this completeness more necessary than in the paralytic cases. One also wonders whether the physical and psychic regression enforced by being in the respirator might not facilitate the use of denial.

It has been quite interesting to compare the reactions of adults with those of the children aged 4 to 12 with lower extremity involvement whom we have studied in an interdisciplinary research project at the Psychiatric Institute of the University of Maryland under the direction of Dr. Jacob Finesinger.

Denial was used by these children quite extensively and in varied forms. In some cases the illness itself was denied. One 6-year-old boy said that in the winter he would think about getting cancer and in the summer he would think about getting polio. He had been afraid of getting polio because there were several kids in the neighborhood who had it, and now *he* was not taking any chances on catching it himself. The boy talked about this in

[5] The authors wish to express thanks for the advice of Drs. Erich Lindemann, Carl Binger, Stanley Cobb, John Nemiah and Peter Sifneos.

a cut and dried way without affect. An 11-year-old boy, looking quite frightened, at first said that he felt "all right," and then went on to state only that he "*might* have polio" and he doesn't "want to think about it." One might say that he was denying his illness by making the diagnosis a "might" or "maybe" one, and only a possibility instead of a reality. The denial of the severity of the illness is illustrated in the remarks of an 11-year-old girl. Being in the hospital and not able to go outside didn't bother her since she knew she was going to get well. Another 11-year-old girl at first smiled quite sweetly in response to questions about how she felt when she found out she had polio, but only minutes later she unsuccessfully tried to cover up her tears with this smile while talking about the same subject.

As these children were followed from the acute through the convalescent period, the use of denial by fantasy of the loss of motility became quite evident. For example, one boy in play fantasied himself turning into Superman who then flew around. This same boy would sing about Davy Walker instead of Davy Crockett. Material like this leads one to speculate as to whether the content of this very interesting "traveling psychosis" may not be, in part, a denial by fantasy of the extreme immobilization of the respiratory patient. The almost complete lack of relevant literature on the psychiatric reactions of acute poliomyelitis patients reveals the distance the psychiatrist has stood from the acute infectious disease ward. Dr. Holland and Dr. Coles have helped place him on this ward by the bedside and by the respirator.

ADMINISTRATIVE PSYCHIATRY

A New Field—Challenging and Rewarding

WILLIAM B. TERHUNE, M.D.[1]

The physician, whether he is in private practice, in a group organization, or in a hospital position, is doing some administrative work. It is not generally realized that the intern, the resident, the ward physician, and the chief of a service, all have some administrative duties and should understand the basic principles of administrative procedure. Some training in administration should be a part of the under-graduate medical program. The hospital superintendent, the recognized administrator, must of course be well grounded in this field(8, 14).

Up to a few years ago, physicians generally felt that administration was unrelated to their major concern—the care and treatment of patients. Institutional administration, specifically in hospitals, was considered a matter of budgets and red tape, of political finessing and compromises, a chore to be done by "the other fellow," if possible. It was perhaps natural that this view was held by psychiatrists and persons preparing to be psychiatrists. Modern emphasis on the individual treatment of mental illness and on the doctor–patient relationship casts administration in the role of merely facilitating treatment. It is recognized today, however, that it is in itself a therapeutic tool, a part rather than an adjunct to treatment(15).

The most important single factor in the efficacy of treatment in a mental hospital is the intangible element that can best be described as "atmosphere," according to the findings of a committee of psychiatrists which met under World Health Organization auspices in 1952 to consider the essential elements of adequate mental hospital care. "The mental hospital's role," the committee's report states, "is that of a therapeutic community. As in the community at large, one of the most characteristic aspects of the psychiatric hospital is the type of relationship between people that is to be found within it. The nature of the relationships between the medical director and his staff will be reflected in the relationship between the psychiatric staff and the nurses, and finally in the relationship not only between the nurses and the patients, but between the patients themselves(16)."

Implicit in this atmosphere and in these relationships is effective administration. Let us see why this is so. "Treatment in the mental hospital," according to a 1947 statement by the Group for the Advancement of Psychiatry, "is regarded as a total institutional process, rooted in medical responsibility, but with psychiatrically oriented participation by every staff member, each contributing to the total process on the basis of clearly established administrative allocations of responsibility and of well-grounded and disciplined professional attitudes(5)."

Note the words "clearly established administrative allocations" in the above statement. The mental hospital's administrative structure must carry out the objective of improving the individual patient's condition as speedily as possible. The hospital's facilities and the services of its personnel must be coordinated through effective administration, so that they constitute a unified instrument of treatment and rehabilitation(15).

Viewed in this way, administration is not something divorced from and opposed to clinical psychiatry. Since good administration is, in essence, good interpersonal relations, it calls for therapeutic skills of a very high order(12). I believe that if residents in psychiatry are brought to understand these aspects of administration, they will be eager to enter this comparatively new and challenging field.

The basic principles and procedures of administration that have been developed by industry are applicable to administration in hospitals and other medical groups. In brief,

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administration consists of deputizing, authorizing, and supervising. The first 2 functions call for initial action that is decisive and thoughtful. The right people must be chosen —people capable of carrying the responsibilities deputized to them; and they must be given authority commensurate with these responsibilities. The third function, supervising, is a continuing one that presents the main problem in administration. It is based on a free flow of information from the top echelons to the lowest levels of the organization, and from the lowest to the top. There must be a 2-way flow, up *and* down the ladder of organization, and also a horizontal flow (if one may use such a term) between branches of the organization at various levels (1, 8).

Communication, it has been said, is the heart of good administration. The most effective means of communication are face-to-face and group discussions. The findings of social science have shown over and over again that understanding and compliance are greater when information is derived from group decisions rather than from directives and orders superimposed from above. Written data—memoranda, manuals, posters, and bulletins—should be thought of chiefly as a means of recording decisions arrived at through conferences and group action(8). We touch here upon many factors that are of interest to the psychiatrist; unfortunately, they cannot be discussed at length in this paper.

These general principles and procedures of administration are applicable in any organization. Nevertheless, the analogy between industrial and medical administration must not be pushed too far. Considering specifically the mental hospital, the "product" is the patient and his recovery. Obviously, it cannot be turned out on a mass-production basis; it must be "crafted" to individual needs. The motive is the maximum improvement of the patient, whereas in industry the motive is profit(8).

As a matter of fact, the application of administrative principles and procedures is not identical in a general hospital and a mental hospital. For this reason, The American Psychiatric Association came to realize that standards and certification procedures should be set up for mental hospital administrators, in line with the trend in training courses and certification for general hospital administrators(11). This view was "without prejudice" to the many superintendents who have been trained by precept and experience, and are serving as able administrators. More formal and adequate methods of training are needed today(12). A permanent Committee on Certification of Mental Hospital Administrators was established by The American Psychiatric Association in 1953. In addition to setting up standards, evaluating the qualifications of candidates for certification, and issuing certificates, the Committee was empowered to advise on courses of study and technical training in this field and to distribute information that would promote the fitness of persons wishing to qualify as mental hospital administrators(3).

Under the impetus of the Committee's activities, and also because of the growing awareness of the importance of administrative psychiatry, training courses have been established at the Menninger Foundation, Columbia University and the University of California; and others are in the planning stage.

A study is now being undertaken at the Yale University School of Medicine to ascertain the specific requirements for training in administrative psychiatry, and to determine the best pedagogical procedures. This study, covering a 5-year period, is sponsored by the Yale School of Public Health, Section on Hospital Administration, the Faculty of Psychiatry, and the Connecticut Department of Mental Health, with assistance of funds provided by the National Institute of Mental Health.

The course at Columbia University, which opened in the fall of 1956, is cooperatively administered by the University's School of Public Health and Administrative Medicine and the Department of Psychiatry of the Faculty of Medicine with consultation and participation in the teaching program by the New York State Hospital Service and The American Psychiatric Association.

The curriculum time, totaling 20 months, is divided into 4 sections, leading to a Master of Science degree in Administrative Medicine: Basic courses in the School of Public Health and Administrative Medicine, courses

in the Department of Psychiatry, supervised field observation in community and institutional programs, concluding with a thesis relative to a special project carried out by the candidate. Eight of the 20 months are in academic residence, divided into two 4-month periods; 4 months in academic residence, 12 months in a supervised administrative residency (or in a position already held by the candidate) during which a special project is carried out, and the final 4 months, again in academic residence. The course, as now set up, is designed to fit the individual's need for training, and to provide basic academic material that is lacking. By dividing the academic work in 2 sections, the candidate may take a leave of absence from his position, return to it for a year, and then complete the remainder of his academic residence.

There is a Curriculum Advisory Committee consisting of 10 experienced men and women who consult more formally with the faculty and are available to advise on the eligibility of candidates for admission. The United States Public Health Service has provided a few advanced traineeships for outstanding students.

The Menninger Foundation's School of Psychiatric Hospital Administration had its inception in an informal study group in administration set up at the request of third-year residents. Dr. R. C. Anderson, manager of Winter V.A. Hospital, described this experiment at The American Psychiatric Association's 6th Mental Hospital Institute in 1954, and noted, significantly, that the value of the training was so obvious that it was planned to give the undertaking more definite form(9).

The School as now constituted combines seminars in subjects related to mental hospital administration, with practical experience. Thus the work situation and the theoretical material can be correlated. Supplementing these 2 areas of training are university classes, staff and administrative conferences, elective seminars and the writing of several papers on selected problems of mental hospital administration. Work is undertaken on specific administration problems under the supervision of a certified mental hospital administrator(6).

At Topeka, the course in Psychiatric Hospital Administration is sponsored by the Menninger Foundation in cooperation with Topeka State Hospital, and Winter V.A. Hospital. This training is supplemented by field trips in Kansas to Larned State Hospital, Osawatomie State Hospital, Parsons State Training School, Winfield State Training School, and several hospitals in other states. Additional teaching in special areas of administration is provided by the personnel of the Goodyear Tire and Rubber Company, the Division of Institutional Management of the Kansas Board of Social Welfare, various divisions of the Kansas Department of Administration, the Kansas Legislative Research Council, the Kansas State Board of Health, and Stormont-Vail General Hospital(6).

Three general types of training are used: 1. didactic instruction; 2. a systematic rotation through major departments; and 3. staff conferences and other meetings; field trips, and written projects. The first consists of seminars on principles and techniques of organization and management, and on the problems of operating hospital departments; the second comprises rotation through the departments of each cooperating institution, to provide an opportunity to observe administrative practices in every important area of the hospital. Several Washburn University courses are included. The participation of a state, federal and private hospital enables students to observe the differences in operation of these 3 settings.

Admission to the School is limited to graduates of approved medical schools who are licensed physicians, who have adequate specialty training in psychiatry, have demonstrated an aptitude for administrative work, and an interest in hospital administration as a career(6). The Menninger Foundation provides a stipend of $7,500 a year for a limited number of students. The first class, consisting of 2 psychiatrists, completed the course in June, 1956. They are now serving as superintendents of large mental hospitals.

I have described the plan of study at Columbia and the Menninger School in some detail, since they may well be the prototype for training in the specialty of administrative

psychiatry. It should be noted that the "trainee" is already a physician who has completed his training in psychiatry, and that the curriculum is designed specifically to fit him for a position as superintendent of a mental hospital.

The importance of the "atmosphere" of a mental hospital was noted earlier in this paper. This atmosphere is set, largely, by the superintendent. He should inspire respect and confidence in his staff and the lay public; he should have intellectual honesty, directness and decisiveness, and a breadth of view, and he should like what he is doing above all other activities (4, 8). This is a large order —and a challenging one. Comprehensive training coupled with a deep understanding of the significance of the administrative work will equip psychiatrists to meet this challenge and fill the need in this area of psychiatry.

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RAPID TREATMENT OF THE PSYCHOTIC PATIENT INTEGRATING ELECTRONARCOSIS AND PSYCHOANALYTIC PSYCHOTHERAPY [1]

ESTHER BOGEN-TIETZ, M.D., AND JO H. JORDAN [2]

THE PROBLEM

It is a common experience that recovery from a psychotic break is often only temporary or incomplete. We are convinced that many such unsatisfactory results can be prevented. The following case illustrates this point:

Martha, a 40-year-old housewife had been a perfectionistic, chronically helpful and intensely critical woman. During the fatal illness of her mother, Martha nursed her without rest. Returning to her husband and children following her mother's death, she could not eat or sleep and lost interest in everything. Following ECT over a period of several months, she returned home, apparently her "old self" again. Within a year, she relapsed into a serious depression and was again stabilized by ECT and supportive psychotherapy. A few months later, when her symptoms returned for the third time within 2 years, she was treated by a psychoanalyst; but he was unable to establish a workable contact. Becoming more remote and discouraged, Martha discontinued therapy; 2 months later she was hospitalized because of a psychotic depression. At this time she was started on a treatment program integrating intensive electronarcosis (EN) and dynamic psychotherapy. She returned to her husband and children and, with continued treatment, gradually gave up her obsessive-compulsive defenses. She has emerged a spontaneously warm, serene woman who no longer dominates everyone with helpfulness, and has shown no signs of depression in the 3 years since treatment began.

The basic personality of this patient was modified during the treatment and this may be the reason that she has remained well. Changes in the personality can occur only after the patient has given up unsatisfactory defenses and acquired more suitable ones. However, if we are to help a patient to change his defenses, he must be capable of contact. But the psychotic patient uses a withdrawal from reality contact as a major defense against anxiety-producing situations. The question is: How can one reach a person who habitually withdraws from contact?

By prolonged and painstaking work, a few psychoanalysts have been able to reach the psychotic by utilizing the minimal reality contact of which he is still capable. The long time required for such treatment has two hazards for the patient:

1. Failure to establish a rapid return to reality estranges the patient's family, job and community relationships. This estrangement increases with time.

Ten years ago an executive giving a public address astonished a large audience by accusing the government of a fantastic plot. His family had observed his personality change over the preceding few weeks. He was hospitalized by a psychiatrist and treated with ECT 3 times a week for several weeks, followed by supportive psychotherapy. He quieted down without giving up his principle delusional ideas. He was unable to leave the sanitarium, much less resume his work. After 9 months of hospitalization, he was started on an intensive treatment program. At the end of 6 weeks, he was without gross symptoms. Nevertheless, it required 3 more weeks before we could persuade his wife to take him home. He had the greatest difficulty being reinstated in his job because, after such long hospitalization, his former associates feared and mistrusted him. During the patient's long absence his son had become delinquent and it was very difficult for the father to regain his son's confidence and help him.

In this case the patient's recovery was made especially difficult because the external contacts had deteriorated with time.

2. The longer the break with reality, the more restitution symptoms the patient will use to ward off anxiety.

Louise was an attractive 20-year-old college student from a cultured home. At college, away from home for the first time, she found it impossible to concentrate on her work, gave up social life and returned home in a panic. She became hostile and seclusive, and developed ideas that her parents wrote newspaper editorials about her and that there were spotlights focused on her. Almost at once she was taken to a psychoanalyst who treated her with daily psychotherapy for over 3 years. She was not able to resume her college work and led a bizarre life. She lived for a while in various sanitariums and sometimes in an apartment of her own accompanied by an elderly woman attendant; she was remote, unsocial, secretive and occasionally dangerous to herself and others. Finally, she had

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to be committed because she was uncontrollable. After 6 weeks of hospitalization, during which she received 20 EN, she was started on active psychotherapy. One month later, she was able to leave the sanitarium and live with other recovering patients in an apartment, under supervision. Maintenance electronarcosis was continued along with psychotherapy. Three years after EN was begun, although she has attended college for 2 years and is becoming a spontaneous, active, charming person, she retains considerable anxiety regarding close relationships.

The slow recovery of Louise seems primarily attributable to the fixation of psychotic mechanisms since her break with reality was prolonged by palliative therapies. Of course, both of the deleterious effects of time are present in all cases.

Cases such as these have led us to the following convictions: (1) To insure lasting recovery from a psychosis, it is often necessary to change the prepsychotic personality. (2) The more rapidly contact with the patient can be established, the more rapidly can we restructure the personality. (3) EN can be used to obtain contact rapidly and to maintain it. (4) With adequate contact, psychoanalytic psychotherapy can be used to restructure the personality.

Below is a treatment program for the psychotic patient that utilizes simultaneous application of these two methods by individuals trained in both.

THE ROLE OF ELECTRONARCOSIS

Electronarcosis is a modified, electrically induced seizure followed by several minutes of subconvulsive electrical stimulation, sufficient to maintain bilateral flexor tone in the arms without interference with respiration. Since any state implying loss of control arouses great anxiety in a person whose ego is already seriously threatened, our technic of electronarcosis emphasizes the reassurance, comfort and safety of the patient. For example, special precaution against anxiety-producing conversation must be employed. Intravenous thiopenthal, to which has been added atropine and caffeine, is used to eliminate awareness of the placing of the electrodes and the insertion of tongue guards or the apprehension following muscle relaxants. Use of the glissando technic and of intravenous anectine permits control of the seizure with a nearly complete elimination of muscular violence. Preoxygenation under positive pressure, routine insertion of an airway, and the use of carbogen (5% CO_2 in oxygen) following the initial grand mal seizure prevent anoxemia.

The patient is spoken to on awakening after EN to assure him that he is not alone, given a cup of coffee or other drink and allowed to rest as long as he wishes. This is the ideal time for establishing contact as described in detail below.

An essential feature of our use of EN is the spacing of the treatments. As soon as the patient is hospitalized and the diagnosis established, daily EN is begun and is continued until 10-12 treatments have been given. After that, the patient receives 3 treatments the third week, 2 the fourth week and then one a week until treatments can be spaced further apart and finally are no longer needed. In the subsequent stages of recovery, EN may be used to tide the patient over stressful periods.

With this spacing there occurs a predictable sequence of behavior. We consider the patient's progress as taking place through 5 stages. These are: (1) stabilization, (2) confusion, (3) reorientation, (4) rehabilitation, and (5) insight.

During the stage of stabilization, which occurs during the first week, the patient eats and sleeps better and appears his old self. He is polite and guarded, and his conflicts seem to be covered.

In the stage of confusion, in the second and third weeks, the patient unashamedly begins to show behavior which is characteristic of the first years of life. He may become extremely passive or aggressive, clinging, affectionate, untidy or exhibitionistic, often depending on nursing care for dressing and feeding.

During the fourth week the confusion clears and the patient reaches the stage of reorientation. He begins to make repetitive requests for orientation: Where am I? How did I get here? He appears demanding, self-centered, possessive, has a low frustration threshold, and reminds one of a preschool child.

During the stage of rehabilitation in the fifth and subsequent weeks, signs of self-

assertion appear and the patient's capacity for simple enjoyment is markedly increased. Although dependency needs continue, as evidenced by moodiness and rejection of responsibility, the patient shows increasing ability for reality contact and an eagerness for new experiences.

In the stage of insight the patient behaves much like a neurotic person.

This unfolding of successive phases during EN treatment facilitates the concomitant use of dynamic psychotherapy.

THE ROLE OF PSYCHOTHERAPY

Psychotherapy is varied according to the patient's progress. In the stage of stabilization only friendly attention is offered. Attempts to uncover conflicts are usually futile and may reactivate psychotic symptoms.

The treatment of the patient in the period of confusion is an essential aspect of our method. This brief, undefensive state is utilized to meet the emerging infantile needs of the patient with maternal care. Regressed behavior and speech, messing with food or incontinence are not rejected or criticized. All persons connected with the patient's care accept his behavior without undue emotion, the way a sensible mother takes care of an infant. Visitors are not encouraged during this time: we aim at a complete relaxation of standards conforming to the requirements of adult social living. During this stage the therapeutically correct response of all concerned with the treatment is more important than the patient's contact with one specific therapist.

The state of confusion is important in two ways: the uninhibited patient conveys to the observing therapist drives otherwise masked and distorted by habitual defenses. This facilitates rapid understanding of dynamics which will prove time-saving in later psychotherapy. Also, during this time of confusion, we have an opportunity to change the patient's way of responding to human contact and thus to reality.

As the patient wakes up from EN, his recognition of the outside world is slowed down. The recovery room in which he awakens offers a peaceful, reassuring atmosphere. We use a procedure symbolic of infant feeding to observe the patient's reaction to external stimuli and to establish contact. The most accessible state is immediately following an EN, during the second and third weeks. The physician or assistant carrying out this procedure in the first awakening moments should be capable of establishing an atmosphere of maternal warmth, tenderness and total acceptance. Standing close to the patient, the therapist presents a moistened, rope-handled lollipop to his lips. The patient may make sucking movements, opening his mouth, or clenching his teeth to prevent the candy from entering. He may accept the candy and bite it fiercely; he may spit it out or actively prevent its removal. The therapist does not interfere but, guided by the patient's response, continues to offer the stimulus with encouraging words such as "It is good," "You can take it," I'll give it back to you." And with this the therapist attentively follows the patient's eyes, his every move and change of expression.

When the patient seeks the therapist's eyes with a smile, we conclude that he has associated pleasure with the mother surrogate. This conclusion is confirmed by subsequent efforts to touch the therapist. This acceptance of maternal care is the beginning of anxiety-free contact with the outer world. When the patient wakes up fully, he may return to his remote or hostile attitude. However, repetition of these contacts over a period of about 2 weeks establishes a positive relationship between the patient and other persons. This becomes the basis for communication in the succeeding period of reorientation.

Once the patient has begun to accept help and satisfaction from others, we augment his receptiveness to external sources of pleasure, while avoiding overstimulation. The therapist does not confront the patient with difficult reality problems during reorientation. Like the preschool child, he must not be overtaxed. The therapist gives continuous encouragement, sharing walks, treats, games and small errands. Before the patient leaves the hospital, the human contact which we offer will have become indispensable.

Contact is established with close relatives of the patient, individually or in a group, to help them acquire understanding and to prepare them for the patient's homecoming.

Where the environment is too destructive, the patient is helped to accept a new environment.

When he returns to the community, the integrated treatment program continues on an ambulatory basis. The rehabilitation period is often used by the therapist to guide the patient toward realistic changes in his life situation which will prevent a return to passive adaptation. We do not hesitate to become active when necessary: we may aid the patient to find a job and living quarters; we may guide him to educational and social opportunities, or even assist in managing a budget. Being genuinely helpful without magic or omnipotence, the therapist becomes an ally.

With support, the patient learns to meet reality with less anxiety. As he evidences further ability for reality testing, he receives some expression of the therapist's appreciation of his progress. We make use of any common ground to break through the patient's former isolation. Empathy and active advice, however, do not necessitate entering into the patient's problems; after all, our ultimate goal is to render the patient independent. To this end we encourage efforts at selfassertion and critical judgment, although it may be aimed at the therapist. In therapy the patient often realizes for the first time that disagreeing does not destroy an established relationship. Once convinced of this, he can permit himself to differ from important people and from the rules of his early training, instead of retreating into hostile remoteness.

A valuable means for promoting ego strength is identification with a group, either in an activity program or in group psychotherapy. As soon as the patient begins an active search for companionship and gratification, his choice and judgment are watched and at times supervised to exclude real danger.

Progress and growth during rehabilitation are rarely smooth or continuous and are met with flexibility in techniques. Above all, the therapist with his knowledge of the usefulness of EN can recognize the need for maintenance treatments to assure uninterrupted reality contact without excessive anxiety or acting-out.

Acceptance in this re-educational period of psychotherapy is tempered with firmness in which the therapist's integrity holds up in spite of testing pressures from the patient. Pressures stemming from emerging impulses are dealt with by interpretation. Once the transference has been firmly established, the patient is helped to become more aware of his emotions. His clinging to old ways of reacting is interpreted, while therapy encourages him to recognize and seek satisfaction for his present day needs. This marks the beginning of insight psychotherapy.

Insight psychotherapy with the recovering psychotic patient differs somewhat from that used with the neurotic patient. The therapist is not simply a passive reflector and objective interpreter of the patient's past and present conflicts; but remains ready to intervene actively to prevent too high a level of anxiety by shifting as necessary from passivity to active alliance with the patient.

Summary

The psychotic patient, no matter what his underlying character structure may be, reacts against deprivation with the defense of a break with reality. Intensive EN quickly produces a state in which gratification of infantile needs becomes the basis for reality contact. While reality contact is sustained with maintenance EN, re-education leads to a secure basis for restructuring psychotherapy. This, in turn, makes the defensive break with reality unnecessary.

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DISCUSSION

DR. BERNARD C. GLUECK, JR., M. D. (Minneapolis, Minn.).—The technique described by Dr. Bogen-Tietz, using daily electronarcosis treatments, appears to produce changes in the psychological organization of the patient and in his physiological responses similar to those observed in patients treated with the technique first described by Milligan in 1946, which involves the use of 3 electroconvulsive treatments per day on a daily basis. The stages of change described by Dr. Tietz correspond remarkably with those observed using 3 convulsions a day rather than 1 convulsion followed by some minutes of electrostimulation. It is interesting to speculate upon the changes in the brain which lie behind the psychological and physiological changes observed in the patient.

We have been concerned with investigating this problem during the past year, and at the present time are looking into the general thesis that the electric current and the convulsive seizure produce a marked vasoconstriction of all of the blood vessels supplying the brain. In the ordinary convulsive treatment this lasts from 40 seconds to perhaps as much as 3 or 4 minutes, usually followed by a marked vasodilation. Perhaps with the convulsive seizure followed by electrostimulation, the vasoconstriction persists during the entire period of the stimulation, resulting in a much longer period of diminished blood supply to the brain than with the usual electroconvulsive seizure. We are working on the premise that this vasoconstriction produces some type of deprivation to the cortical cells which is responsible for a shift in metabolism of the brain tissues. That this may be related to the rather marked physiologic, as well as psychologic changes in the patient, remains to be demonstrated, but appears to be a promising line of investigation.

However these changes may be produced, the very rapid shift from a state of chronic tension and anxiety, with its various physiologic and psychological manifestations, to a state of relative homeostasis marked by freedom from anxiety, and a shift in the physiologic state to a more nearly normal situation, is extremely impressive. It leads one to the conclusion, which may perhaps be wishful thinking, that we are able to reverse quite rapidly, through the use of these techniques, the destructive effects of the chronic anxiety and tension that appear to be part of the psychotic process. The memory impairment described by Dr. Bogen-Tietz, which in the 3-times-a-day convulsion technique is a complete amnesia lasting for 7 to 14 days, may be involved in the therapeutic response. It does not appear, however, to be the destructive, interfering, to-be-avoided-at-all-costs, kind of result of the electric stimulation of the brain that has been ascribed by many clinicians to these techniques. The memory loss has also led to serious criticism of any electrostimulating procedures, since this was interpreted as representing serious brain damage, and also was supposed to produce marked interference with any kind of psychotherapy following treatment. Dr. Bogen-Tietz has described a marked facilitation of psychotherapy following this type of treatment. Our own experience confirms this finding. Not only is the increased accessibility described by Dr. Bogen-Tietz an important part of the pattern, but we have found a consistent improvement in the recovery of early memories that were previously repressed. This is one of the results of treatment most commonly referred to by our patients. They contrast the sharp improvement in the recovery of remote events with the difficulty in recent memory. It has resulted in our being able to construct far more accurate psychodynamic formulations in terms of early life experiences, and has helped the patient to integrate the early traumatic experiences with the behavior patterns of the adult years.

There appears to be one difference in the results of the electronarcosis and the standard electroconvulsive method in that we find a persistent amnesia for the events immediately preceding the treatment, with the retrograde period being determined apparently by the duration of the acute psychotic process. This may be anything from several weeks to as long as 1 to 2 years.

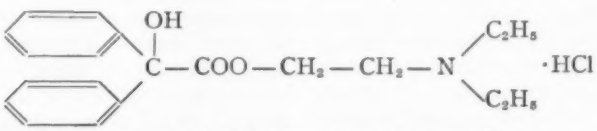
I would like to re-emphasize Dr. Bogen-Tietz' contention that the rapid interruption of the psychotic process is of tremendous therapeutic importance, both from the standpoint of relieving symptoms at the earliest possible moment in order to facilitate contact with the patient, and also to prevent the patient from using over and over again the processes of miscarried repair that are the hallmark of the psychotic break and the failure of reality adaptation. I believe that Dr. Bogen-Tietz has made a very important contribution to our treatment of the psychotic patient, and am hopeful that this sort of experimentation with variations in the application of electric current to the brain will continue, since we have, as yet, no uniformly satisfactory approach to the problems presented by the many varieties of psychotic disturbance that we are daily called upon to treat.

CLINICAL NOTES

OBSERVATIONS UPON THE THERAPEUTIC USE OF BENACTYZINE SUAVETIL [1]

VERNON KINROSS-WRIGHT, M.D., AND JOHN H. MOYER, M.D.[2]

Benactyzine is an anti-cholinergic drug first made in 1936 by the Ciba Laboratories, with the following formula:



Benzilic Acid Diethylaminoethyl Ester HCl

Jacobsen and his co-workers in Denmark studied Benactyzine and a number of related compounds on the assumption that an excess of acetylcholine in the nervous system might underlie certain types of emotional illnesses. Pharmacologically, the drug resembles atropine though less potent in its peripheral parasympatholytic effects. There is but little effect upon the blood pressure and little or no sedation. It has pronounced local anesthetic activity. Central effects of the compound have been carefully explored by Jacobsen in a series of animal and human experiments. Utilizing a modification of Masserman's technique, he found that the drug would abolish the characteristic behavior in a conflict situation. Signs of stress in animals conditioned to an escape response were minimized; simultaneously their responses became faster and better coordinated.

In man, Benactyzine (in larger than therapeutic doses), according to Jacobsen, produces dizziness, relaxation of the musculature, thought blocking with reduction in spontaneous associations; and some tendency to lose the train of thought, complete or partial suppression of the alpha rhythm in the electroencephalogram, and a reduction in autonomic response to emotional stress.

Clinical results achieved by Jacobsen, Munkvad and others in many hundreds of patients in Denmark indicate 50-80% improvement in neurotic patients. Anxiety reactions and compulsive states were most influenced while there was little influence upon schizophrenic, hysterical or depressive conditions. Side-effects were transient and included peripheral atropine-like effects and occasional unmotivated mirth. Munkvad used as much as 90 mg. daily in psychotics without improvement. The average dose, however, for neurotic patients was 3-10 mg. daily.

Substantially similar results have been reported by Davies and others from England. These British writers have been more concerned though about the bad effects of the drug upon attention, thinking and judgement.

We were impressed by the Danish reports and decided to give Benactyzine a clinical trial early in 1956.[3] Seventeen normal volunteers were given 1-5 mg. of the drug in a single dose. With the larger dose, heaviness of the limbs, dilatation of the pupils, euphoria and some distortions in the perception of the passage of time were noted. Two of the subjects noted difficulty in organizing their thoughts and keeping track of what they were saying. Ten of the subjects (on 1 mg. dosage) were not able to distinguish the drug from an identical placebo taken in the same experiment.

[1] Benactyzine is sold under the name of Suavetil in Denmark and England.

[2] From the Departments of Psychiatry and Pharmacology, Baylor University College of Medicine, Houston, Tex.

[3] Benactyzine was kindly supplied by Smith, Kline & French Laboratories, and Lloyd, Dabney & Westerfield.

Over 70 patients have received Benactyzine though only the first 42 are considered in this report. The patients were all treated in the outpatient clinic and included representatives of the various types of psychoneuroses as well as a few depressions and two schizophrenics. Dosages varied from 3-16 mg. a day in divided doses for periods up to 12 weeks. No attempt was made to establish controls in this preliminary study and some of the patients were receiving concurrent psychotherapy. A number, however, were given identical placebos without their knowledge for varying periods during treatment. In most cases the patient could readily distinguish these from the active drug largely because of lack of side-effects. However, some claimed satisfactory relief from placebo. Of our patients about one-third were greatly improved by both objective and subjective criteria; one-third obtained some benefit and the remainder were unchanged or worse.

Side-effects were infrequent with doses of less than 4 mg. daily. With 4-8 mg. atropine-like effects of dryness of mouth, pupillary dilation, slight palpitations and also occasional difficulty in concentration were noted by a number of patients. In doses above 8 mg. daily these symptoms were noted by one-half of the patients with the addition in some of nausea, anorexia, and constipation. Those taking 12 mg. daily or more were often considerably bothered by heaviness of the limbs, feelings of mental confusion (subjective), emotional lability and feelings of unreality and drowsiness. Dizziness and ataxia were found in some. One patient developed a maculo-papular skin rash. The high incidence of side-effects, particularly the impairment of thinking, caused many patients on the higher dosage to request discontinuance of Benactyzine.

A good clinical response was associated with a calming effect without undue sedation. This was especially noteworthy in the face of formerly stressful emotional situations. We did not observe major changes in neurotic patterns of thinking or behavior. Most were less bothered by the autonomic concomitants of anxiety than formerly, except where side-effects coincided with these. A small number of patients reported their anxiety aggravated by Benactyzine, apparently the result of feelings of depersonalization and lightheadedness.

Comments: Benactyzine produces some interesting and sometimes therapeutically useful effects upon emotionally disturbed patients. Its greatest value appears to lie in the reduction of emotional reactivity to stress. In our hands the drug has not achieved the highly favorable results reported in the Danish and British literature. The incidence of uncomfortable side-effects in our patients has been considerable. It is almost superfluous to comment that the evaluation of any drug offered for the treatment of psychoneuroses requires precise and controlled research design. We report these preliminary observations because of the considerable interest that this compound has aroused in the United States.

THE DUAL ACTION OF THE TRANQUILIZERS

JOSEPH A. BARSA, M.D.[1]

A tranquilizer, in contrast to the "older" sedatives like the barbiturates, is defined as a drug which calms the emotions without affecting mental acuity. Truitt has classified the drugs chemically into 4 main groups, as follows: 1. Rauwolfia alkaloids, of which reserpine is the most important; 2. Phenothiazine derivatives, such as chlorpromazine (Thorazine), promazine (Sparine), promethazine (Phenergan), mapazine (Pacatal), proclorperazine (Compazine); 3. Propanediol dicarbamate or meprobamate (Miltown, Equanil); 4. Diphenyl methanes, of which the most important are azacyclonol (Frenquel), benactyzine (Suavetil), hydroxyzine (Atarax).

It is used to be thought that the tranquilizing effect or calming effect was the principle therapeutic action of these drugs, and that it was this which operated both in allying the anxiety of the neurotic and in allowing the schizophrenic to shed his delusions and hal-

[1] Rockland State Hospital, Orangeburg, N. Y.

lucinations. In other words, if the anxiety of the schizophrenic were truly relieved without reducing mental acuity, there would be no further need for delusions and hallucinations which have been considered by some as defenses against anxiety.

However, judging from my own clinical experience I believe that there are two separate and distinct effects of these tranquilizers —a tranquilizing effect which calms the patient, and, (for want of a better term) an anti-psychotic effect which combats the delusions and hallucinations of the schizophrenic. These are separate and distinct effects, for one can occur without the other. For example, I have on occasion treated rapidly an actively psychotic schizophrenic with such large doses of reserpine that the patient has become first lethargic, later mentally confused, and finally even semi-comatose. I have then withdrawn the drug, and, on regaining his alertness, the patient has been in a remission of his psychosis, this remission remaining for many months. Certainly the remission was not produced by a tranquilizing effect as I have defined it. Furthermore, in treating a schizophrenic with reserpine or one of the phenothiazines, we sometimes leave him with considerable (at times increased) tension and anxiety, even though his delusions and hallucinations may have disappeared. On the other hand, it is possible to obtain what is apparently a truly tranquilizing effect without eliminating the delusions and hallucinations. This is most common with meprobamate which is one of our best tranquilizers, but which has a negligible anti-psychotic effect. Thus, the tranquilizing and anti-psychotic effects in these drugs can be considered separately and evaluated separately. We can, therefore, list the 4 groups of tranquilizers in the order of their tranquilizing effectiveness as follows: meprobamate, phenothiazines, Rauwolfia, and diphenyl methanes. But in the order of their anti-psychotic effectiveness they are: phenothiazines, Rauwolfia, meprobamate and diphenyl methanes. It should be noted that the above listings are based on the average response of patients, and it does not preclude individual exceptions.

Does all of this mean that the tranquilizers act on one cerebral center for their tranquilizing effect and on another for their anti-psychotic effect? Perhaps. Further research must be done in this area.

Does this also mean that the tranquilizing drugs in their anti-psychotic effect strengthen the patient's ego structure? Definitely not. When a schizophrenic is in remission as a result of drug therapy he is just as liable to plunge again into psychosis unless the ego is protected by a maintenance tranquilizing effect of the drugs, or, better still, unless the character structure is changed and strengthened by intensive psychotherapy.

CORRESPONDENCE

ELECTROSHOCK THERAPY

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: We wish to confirm the advantages of the method of treatment described by D. J. Impastato in The American Journal of Psychiatry, 113: 461, 1956.

Impastato does not use barbiturates before electro-convulsive treatment, but only 10 mgms. of succinylcholine. He follows it 10 seconds later with a *petit mal* electro-convulsive stimulation and 20 seconds later with the usual *grand mal* stimulation. He has used it till now in 100 cases.

This method, first introduced by one of us 2 years ago when working with Dr. S. V. Marshall as anaesthetist, has been used by us for all patients needing relaxants over the past 18 months. We have successfully used it till now in about 3500 treatments and never once used pentothal.

Our method only slightly varies from the method described. We are using the Minecta Electrotherapy Unit with Electronic Timing and automatic glissando. The voltage ranges from 80-140V, the timing from 0.5-2 seconds, the muscle relaxant used is Brevidil E.

Patients are given sodium amytal gr. 3 to 6 an hour before treatment in order to decrease the apprehension which psychiatric patients feel for any strange procedures. The subconvulsive stimulation (80-90V 1 sec) if given at the correct time and repeated if necessary, causes complete amnesia for any unpleasant accompaniments of the relaxant. We have found that it is wise to give the first subconvulsive stimulus 10 seconds after the injection of the relaxant and to repeat the stimulus if the onset of relaxation appears to be at all delayed. Inhalation of oxygen by the patient during injection and up to the time of the first stimulus lessens the danger of any unpleasant preliminary sensation. Oxygen is also administered under pressure after the cessation of the "convulsion" until respiration is fully established. We consider this essential in order to avoid any anoxaemia, and clinical impression is that this avoids confusion especially in elderly patients.

In some cases inflation with oxygen before treatment is all that is needed to eliminate the subjective feeling of oppression or suffocation, and no subconvulsive stimulation is necessary.

This method successfully eliminates the necessity for intravenous barbiturates, not only shortening and simplifying the procedure, but also eliminating the complications which have occasionally followed the injection of pentothal.

We are therefore in full agreement with Impastato's conclusions and advocate elimination of pentothal from electro-convulsive therapy.

A. T. EDWARDS, M B. B. S. (Syd.),
I. A. LISTWAN, M. B. B. S. (Syd.),
Sydney, Australia.

REPLY TO THE FOREGOING

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: I was very glad to be informed that Drs. Edwards and Listwan have used this method of treatment in over 350 patients successfully and that they feel as I do that it is best not to administer intravenous barbiturates to patients undergoing electro-convulsive therapy. It is still my opinion that the technic described is the safest, simplest and best one so far devised for electroshock therapy.

The only complication of the treatment is that a fairly good number of patients develop some anxiety. Although the incidence of anxiety is not greater than that developed by

patients receiving unmodified electro-convulsive treatment, it is still a problem and should be avoided as much as possible. We are presently studying this problem. I was, therefore, very glad to learn that Drs. Edwards and Listwan, in order to diminish the anxiety, use sodium amytal by mouth one hour before treatment and preoxygenate the patients just prior to the treatment. I have already tried the suggestion of preoxygenating the patients before treatment and so far find it very useful.

Drs. Edwards and Listwan should be congratulated, *inter alia,* for their modifications which apparently diminish the anxiety and enhance the usefulness of the technic.

DAVID J. IMPASTATO, M. D.,
New York City

COMMENT ON LETTER FROM DRS. EDWARDS AND LISTWAN

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: With my approval Drs. Edwards and Listwan have mentioned my name in their letter regarding the method described by Dr. Impastato, because as anesthesiologist I was associated with Dr. Edwards in his earlier trials of this new method, which he considers to be superior to the usual sequence of thiopental and succinylcholine (SCC) for the purpose under consideration. May I hasten to state that, after an experience of some 15,000 applications of the latter combination during the past 7 years, I must disagree entirely with the conclusions reached by Drs. Edwards and Listwan in this connexion. So too, apparently, with Dr. Impastato.

In my opinion it is nothing short of miraculous if Dr. Impastato was able to get adequate relaxation with only 10 mgms., or less, of SCC acting over a period totalling 30 seconds. Employing the usual technic my present conclusions are that SCC requirements generally range between 15 and 65 mgms., and that such dosages must be allowed from 60 to 90 seconds to act fully before the *grand mal* stimulation is given, depending on the build, health, age, etc., of the patients concerned. Only thus may truly efficient modification of the convulsion be obtained in all cases, and yet ensure the restoration of normal breathing almost immediately afterwards. Of course artificial respiration with oxygen by means of a Waters' 'bag-and-mask' outfit must be practised both before and after the '*grand mal* EST stimulation' under these circumstances, especially in aged and cachectic subjects. Some psychiatrists affect to despise the use of oxygen in this manner, and claim that the brief period of apnea following their particular mode of EST is of no consequence. Any competent anesthesiologist, and even anesthetist, knows that any hypoxia, no matter how brief, can damage the ageing brain or heart, sometimes irreparably. Much later confusion and disability, and even untimely death, can be traced back to such neglect to provide adequate lung ventilation and tissue oxygenation during any period of physical stress or impaired respiration. Obviously the efficient giving of oxygen should be an invariable routine in all applications of EST, no matter how healthy the patients might appear to be.

To avoid thiopental on the rather specious grounds that this omission obviates danger, and to give instead a '*petit mal* EST stimulation' only 10 seconds after the relaxing agent, followed in a further 20 seconds by a *grand mal* stimulus, must deprive the procedure of its chief object of preventing traumatic complications. It seems to me that this egregious device has only two advantages; first, cheapness, and second, that by 'going through the motions' of modifying the therapy the operator is merely protecting himself against future legal hazards. To argue that the avoidance of thiopental and the services of an anesthetist reduces the dangers of the treatment is indeed a telling commentary on the general state of anesthesia in the United States of America. It also reflects gravely on the physiological knowledge of the psychiatrists, of whatever country.

To my mind, that of a mere anesthesiologist, the 'no-thiopental' method is based on the false premiss that the preliminary use of thiopental is always dangerous, whereas this is not so when its application is under rea-

sonably expert control. Further the restriction of SCC to virtually ineffectual dosages might also be thought to widen the safety-margin. May I submit that both of these contentions are fallacious, the prevalence of which fallacies indeed do make some psychiatrists chary about using the ordinary sequence. With proper facilities and in competent hands, however, the standard method is eminently satisfactory to both operator and subject alike, while its safety for all cases under similar conditions is quite unquestionable.

As for the 'no-thiopental' device, it is inelegant; it does not effectually suppress the patients' apprehensions, and it favours undue restlessness afterwards. Even if it might permit a more speedy restoration of animation, this is not infrequently of delirious character. The thiopental/SCC sequence, well-conducted, is far superior in almost all respects, and there is practically no reason why any intelligent psychiatrist, who wants to save his patient the expense of an anesthetist, should not be able to learn and conduct safely this valuable technic either for himself or for one of his colleagues.

As one who prefers simplicity whenever possible I must, with some regret, oppose the advocacy of Drs. Edwards and Listwan for the elimination of thiopental from electroshock therapy.

S. V. MARSHALL, M. B., Ch. M.,
Sydney, Australia.

HIGH COST OF ANALYTIC TRAINING

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: The revelations of Potter, Klein and Goodenough (Am. J. Psychiat., 113: 11, May 1957) raise interesting questions regarding the proportion of a professional specialists life that should be spent in formal education. For those who harken to the "Sound of a Distant Dream," pity would be insulting, but the plight of their families cannot fail to arouse sympathy.

Possibly psychoanalytic training could be budgeted for in retirement insurance programmes. At all events, the whole question of how far the will o' the wisp of complete self knowledge should be pursued bears energetic ventilation among psychiatric educators and students.

Those of us who were able to take at least our residency training in institutes where we could study our patients and books with reasonable leisure and security have a great deal to be thankful for.

L. R. MUNDY, M. D.,
Hartford, Conn.

VERITAS

The *Moone* hath her *spots*, and the greatest men have their *failings*. No man is free from errour in this life. Truth could never yet be *monopolized;* the great merchants of spiritual *Babylon* have not ingrossed it to themselves, nor was it ever tyed to the Popes Keyes, for all their brags: The God of truth send us a time wherein mercy and truth may meet together, righteousnesse and peace may kisse each other. *Amen.*

—ALEXANDER ROSS,
Animadversions upon Sir Kenelme Digbie's Observations on Religio Medici (1645)

COMMENT

THE CHICAGO MEETING

The 113th annual meeting of The American Psychiatric Association was held in Chicago, Illinois, at the Morrison Hotel, May 13 through 17, 1957. All sessions took place at the Morrison Hotel excepting some of the round table conferences that were assigned to the Sherman Hotel. The official opening was held in the Terrace Casino on Monday, May 13, and was called to order by the President, Dr. Francis J. Braceland, at 9:15 a.m. The Invocation was given by Rev. W. J. Devlin, and The Association was welcomed to Chicago by Dr. Roscoe Miller, Dean of the School of Medicine of Northwestern University. Dr. Braceland introduced President-elect Dr. Harry C. Solomon, who responded briefly thanking the membership for bestowing this great honor upon him. This was followed by the tenth annual report of the Medical Director, Dr. Daniel Blain, in which he reviewed the highly important activities of the central office during the past year. Dr. Matthew Ross, Speaker of the Assembly of District Branches, reported on the achievements and progress of this body which was organized in 1953. The Chairman of the Committee on Arrangements, Dr. Hugh T. Carmichael, presented the report of the exceptionally well-planned and successful organization of the various functions of the annual meeting. He emphasized the fact that the entire membership of the Committee contributed materially to the planning and that an outstandingly attractive program for entertainment for the ladies was organized by the Ladies Committee, with Mrs. D. Louis Steinberg as Chairman. Dr. Titus H. Harris, Chairman of the Program Committee, reported on the composition of the program, which consisted of 132 scientific papers and 30 round table conferences. The Secretary reported the official membership statistics stating that as of March 31, 1957 the total was 9,295. The Treasurer presented his report on the present financial status of the Association. The Hofheimer prize was presented to Dr. Christoph M. Heinicke of Portland, Oregon, for research done in London, England and reported in the monograph, "Effects of Separating Two-year Old Children from Their Parents: A Comparative Study." The Isaac Ray award was presented to Dr. Manfred S. Guttmacher of Baltimore, for his outstanding contribution to the better understanding between psychiatry and jurisprudence. The Mental Hospital Achievement silver plaque awards were then announced by Dr. Daniel Blain and will be presented this Fall to the Saskatchewan Mental Hospital, Weyburn, Sask., Canada, and to the Receiving Hospital, Detroit, Michigan. Honorable Mentions were given to the Northern State Hospital, Cedrowoolley, Washington, and the Madison State Hospital, Madison, Ind. Election of new members and Fellows took place at this session and this made it possible to hold the convocation for newly elected Fellows at a highly impressive and dignified session on Tuesday morning. The number of newly admitted members was 667, broken down as follows: 341 associate members, 313 members, 2 reinstatements, 11 corresponding Fellows.

The highlight of this opening session was the address by the President. It was a most thoughtful, comprehensive and inspiring message in which Dr. Braceland reviewed the present status of psychiatric practice and research and the guiding principles of continuing the progress of the Association. The President-elect, Dr. Harry C. Solomon, responded warmly and appreciatively to the presidential address. The Benediction was given by Reverend Donald Cox, Chaplain of Kankakee State Hospital.

The next business session for the membership was called to order by the President on Tuesday morning, May 14. The Board of Tellers reported the results of the ballots both for the election of officers and the vote on the amendments to the Constitution and By-laws. The total number of ballots mailed was 7,200; 4,398 ballots were returned, 28 of which were invalid. The officers elected for 1957-1958 were as follows: Dr. Francis J.

Gerty, President-elect; Dr. William Malamud, Secretary; Dr. Jack R. Ewalt, Treasurer; incoming councillors: Dr. C. H. Hardin Branch, Dr. Addison M. Duval, and Dr. Jacques Gottlieb. The proposed amendment to the Constitution to provide the establishment of two newly elected officers to be known as Vice-presidents, drew a vote of 3,755 in favor, 146 opposed, and 48 invalid ballots. The result of the vote to amend the By-laws was 3,752 in favor, 146 opposed, and 48 invalid ballots. Reports were then presented by the Coordinating Committee Chairmen to review the activities and plans for their respective Standing Committees. Dr. Wilfred Bloomberg reported for the Committees on Professional Standards, Dr. Frank J. Curran for the Committees on Technical Aspects of Psychiatry, and Dr. William C. Menninger reported for the Committees on Community Aspects of Psychiatry. Following the business session and after a brief recess, the second annual convocation ceremony honoring newly elected Fellows was held in the Terrace Casino, at which Dr. Solomon presented a reading on "The Objectives of The American Psychiatric Association" and Dr. Francis J. Gerty, the incoming President-elect, spoke on "Fellowship in the American Psychiatric Association." Dr. Braceland welcomed the incoming Fellows and Rev. Edward P. Dickson gave the Benediction.

The program was distinguished in several respects. The Association commemorated at this meeting the 100th anniversary of the birth of Professor Eugen Bleuler who has made such signal contributions to psychiatry. The commemorative exercises were highlighted by the Fellowship Lecture by Dr. Gregory Zilboorg entitled "Eugen Bleuler and Present Day Psychiatry." Bleuler's contribution was discussed in terms of its relationship to the contributions of his two great contemporaries, Kraepelin and Freud. Dr. E. Eduardo Krapf gave a scholarly response to Dr. Zilboorg's provocative address.

The scientific program was organized most effectively by Dr. Titus H. Harris and his committee, and, in keeping with the present trend in psychiatry, contained a large number of contributions to research, ranging all the way from biochemistry and pharmacodynamics to psychological, psychopathological and social studies. Notable on this program was the first Adolf Meyer Research Lecture which was given by Dr. Stig Akerfeldt of the Nobel Institute, Stockholm, Sweden, on his recent work in the field of "Serological Reactions of Psychiatric Patients to Dimethyl penyline diamine." This was organized by the Program Committee in collaboration with the Committee on Research, and a number of scientists participated in reporting their work in relationship to the results of Dr. Akerfeldt's investigations.

The next business session was held on Wednesday morning, May 15, in the Terrace Casino. The Secretary reported the actions of the Council during the past year which were duly approved by the membership upon motion from the floor. The establishment of a number of new district branches was approved by the membership. Another feature of this program was the presentation of certificates to the retiring councillors and committee chairmen of the Association.

The annual dinner was held also in the Terrace Casino on Wednesday evening, May 15, and was well attended. The highlight of the evening was the presentation of a commemorative framed certificate and silver bowl to Mr. Austin M. Davies, Ph. B. by Dr. Clarence B. Farrar, Editor of the AMERICAN JOURNAL OF PSYCHIATRY, on the occasion of Mr. Davies's twenty-fifth year of dedicated service to the American Psychiatric Association in the capacity of Executive Assistant and to the AMERICAN JOURNAL OF PSYCHIATRY as Business Manager. The presentation of the past-president's medal to Dr. Francis J. Braceland was made by Dr. Kenneth E. Appel.

The final business session was held on Friday morning, May 17, with Dr. Braceland presiding. Dr. Braceland presented the gavel to Dr. Solomon signifying his assumption of the presidency, and the 113th annual meeting was officially closed at 5:00 p.m. on May 17.

The meeting in general stood out as one of the finest in the history of the Association and was eminently successful both scientifically and socially. The total attendance was as follows: members 1,924, non-members 953, complimentary (undergraduate and graduate students) 137, guests 523, and ex-

hibitors 199, a total of 3,736. The success of the meeting was largely due to the great leadership and wise guidance of Dr. Francis J. Braceland, the retiring president, and the harmonious cooperation of the entire membership, officers and committees. Special recognition and thanks should go to those who have helped in making this success possible, more particularly to Mr. Austin M. Davies, the Executive Assistant, Dr. Blain and Messrs. Robinson and Turgeon of the central office, and members of the staff of both offices as well as the Committees on Arrangements and Program.

WILLIAM MALAMUD, M. D.,
Secretary.

MIND MOLDS

From what I have said, it is clear that I was in the intellectually enviable position of being able to approach these [religious] problems without that conditioning in youth which, for the large mass of Christians, stigmatizes doubts of creed or critical appraisal of doctrine as reprehensible or even sinful; and which automatically inhibits later contemplation except from theologically fixed premises. My mind was not, in the liquid state of childhood, poured into a mold and allowed to harden into one the other of the ingots of Christian denomination which, whatever their minor differences of pattern, all hold through life, unmalleable in the fires of reason, the basic form of unquestioning faith.

—HANS ZINSSER
(The Biography of R. S.)

CREEDS

On every hand, in individual as well as in national life, numberless facts proclaim that human nature is better adapted to the circumstances of existence than to require, under threat of dissolution, the solution of ultimate problems. The revelations that come to man disclose ever proximate goals, and each new step means a new revelation. . . . To have observed that human society generates moral ideals together with impulses and desires to realize them, is, whatever our theories about them, sufficient for practical life. To have gained that knowledge is to have secured ground unshakeable by any philosophy. . . .

He has a sufficient living creed who can affirm that moral forces actually come into existence in human society, and that its welfare and the individual's self-approval and self-respect are, as a matter of fact, indissolubly bound with the fulfillment of the moral demands.

—JAMES H. LEUBA,
The Belief in God and Immortality

NEWS AND NOTES

National Committee Against Mental Illness, Inc., Washington, D. C. (Executive Director, Mike Gorman).—This Committe has prepared a brochure (45 pp.) containing a great variety of statistical facts regarding mental illness in the United States. Date of compilation: January 1957.

The facts herein are drawn from many reliable sources—national and state agencies, and special surveys and reports. The Biometric Branch of the National Institute of Mental Health of the U. S. Public Health Service cooperated with the Committee in preparing the data here presented. Both clinical and economic aspects of the problem are set forth in figures, also the degrees of efficiency of the various state services, and amounts spent or required for new hospital construction, and personnel increases to care for urgent needs. There is a summary, broken down, of the overall direct cost of mental illness in the country today. This annual cost is estimated at approximately $4,172,124,955.

There are about 586 mental hospitals in the United States. The average bed shortage is 44%. Of 124 hospitals inspected by the Committee appointed for that purpose by The American Psychiatric Association, 8 received approval, 31 conditional approval, 85 were below minimum standards.

Approximately $27,353,000 is being spent on research by state, federal, and other agencies. The results are tabulated by states. Encouraging results of the newer drug treatment are shown in a lowering quite generally of the annual hospital census.

The address of the National Committee Against Mental Illness, Inc. is 1129 Vermont Ave., N. W., Washington 5, D. C.

Devereux Dinner and Program.—The 16th annual dinner generously given by The Devereux Foundation in connection with the annual meeting of The American Psychiatric Association was held in the Grand Ballroom of the LaSalle Hotel, Chicago, Monday evening, May 13, 1957. Nearly 500 guests were present.

Following the dinner, Dr. Roy Grinker, moderator, introduced Dr. Edward W. Bortz, chief of the medical service, Lankenau Hospital, Philadelphia, and past president of The American Medical Association, who spoke on "Growth and Aging." Dr. Bortz's address was discussed by Dr. Ewald W. Busse, professor of psychiatry, Duke University and Dr. Maurice E. Linden, director, division of mental health, Philadelphia Dept. of Public Health.

North Pacific Society of Neurology and Psychiatry.—The annual meeting of the North Pacific Society of Neurology and Psychiatry was held in the Benjamin Franklin Hotel, Seattle, Wash., April 11-12, 1957. The following officers were elected: president: D. E. Alcorn, M. D., Victoria, B. C.; president-elect: J. W. Evans, M. D., Portland, Oregon; secretary-treasurer: R. M. Rankin, M. D., Seattle, Wash.

The American Board of Psychiatry and Neurology, Inc.—This Board announces the following schedule of examinations: New York, New York—December 16 and 17, 1957; San Francisco, California—March 17 and 18, 1958.

First Canadian Mental Hospital Institute.—For the past 8 years The American Psychiatric Association has organized an annual national institute for mental hospital and related institutional personnel. Lasting for one week, these Institutes have consisted of seminars and workshops focused on a variety of mental hospital problems. Canadian participation has grown larger each year, and action has now been taken to sponsor a similar meeting in Canada.

Working in co-operation, the APA and the CPA will jointly sponsor the first Canadian Mental Hospital Institute at the King Edward Hotel, Toronto, Ontario, January 20-24, 1958. A planning committee, un-

der the chairmanship of Dr. Mary Jackson, Toronto Psychiatric Hospital, has been set up which is working closely with the provincial directors of the CPA. The Canadian Institute will follow the main lines of its American counterpart and will receive organizational staff assistance from the APA Mental Hospital Service.

Program suggestions, advice and comments should be addressed to Dr. Mary Jackson, c/o Toronto Psychiatric Hospital, 2 Surrey Place, Toronto, Ontario.

Dr. Guttmacher Isaac Ray Lecturer.—Dr. Manfred S. Guttmacher, psychiatrist and chief medical officer of the Supreme Bench of Baltimore, Md., is the 6th winner of the $1000 Isaac Ray Lectureship Award of The American Psychiatric Association, it was announced at the APA's annual meeting in Chicago. The Award is given annually to a psychiatrist, lawyer or judge for contributing importantly to better understanding between psychiatry and law.

As recipient, Dr. Guttmacher will deliver a series of lectures on psychiatry and the law, under the sponsorship of the Schools of Law and Medicine at the University of Minnesota, in the academic year 1957-1958.

The Award commemorates Dr. Isaac Ray, a founder of the APA, whose remarkable "Treatise on the Medical Jurisprudence of Insanity," published in 1838, was for many years the standard work on the subject.

Foundations' Fund for Research in Psychiatry.—The Foundations' Fund for Research in Psychiatry wishes to announce that October 15, 1957, is the next deadline for the submission of applications for research fellowships and research teaching grants in psychiatry, psychology, sociology, neurophysiology, and other sciences relevant to mental health.

Interested persons and departments are invited to write for details to: Foundations' Fund for Research in Psychiatry, 251 Edwards St., New Haven 11, Conn.

Dr. Heinicke Receives Hofheimer Prize.—Christoph M. Heinicke, Ph. D., of Portland, Ore., and currently senior research psychologist at the Tavistock Clinic in London, England, is this year's winner of The American Psychiatric Association's $1500 "Hofheimer Prize" for outstanding psychiatric research, it was announced at the APA annual meeting in Chicago.

Dr. Heinicke's prize-winning research dealt with the effects of separating 2-year-olds from their parents. The research is considered of outstanding merit for the methodology of behavior measurement it developed.

The Hofheimer Prize was established in 1947 in honor of Lieutenant Lester N. Hofheimer of New York City, who lost his life in action in the Mediterranean in World War II.

Dr. Hoffman Dies.—Dr. Jay L. Hoffman, associate clinical professor of psychiatry, George Washington University Medical School, and first assistant physician, St. Elizabeths Hospital, Washington, D. C., died following a heart attack at the hospital, May 4, 1957. His age was 47.

Dr. Hoffman was graduated in medicine from the University of Pennsylvania in 1934. He served overseas during World War II and attained the rank of lieutenant-colonel. He had charge of a psychiatric clinic in England. Following the War, he was named chief of professional services, Veterans Administration Hospital, New Bedford, Mass. Since 1953, he had been on the staff of St. Elizabeths Hospital, where in cooperation with the National Institute of Mental Health he was engaged in research. He was a fellow of The American Psychiatric Association and a diplomate of The American Board of Psychiatry and Neurology.

International Society For Psychopharmacology.—At the recent symposium on Psychotropic Drugs held in Milan, Italy, it was tentatively decided to form an International Society of Psychopharmacology, comprising the disciplines of psychiatry, pharmacology, neurophysiology and psychology. An organizational meeting will be held during the International Congress for Psychiatry in Zurich, Sept. 1-7, 1957. All those interested can obtain further information by writing to Herman C. B. Denber, M. D., Director of Psychiatric Research, Manhattan State Hospital, Ward's Island, New York City 35, N. Y.

JOINT MEETING OF ROYAL SOCIETY OF MEDICINE AND MEDICO-PSYCHOLOGICAL SOCIETY.—Immediately after the International Psychiatric Congress in Zurich, the Royal Society of Medicine and the Royal Medico-Psychological Association have organized a joint Anglo-American Symposium to give the opportunity to many psychiatrists in England to hear a group of eminent psychiatrists from America. This symposium will be held at The Royal Society of Medicine, 1 Wimpole Street, London, W. 1., on Tuesday and Wednesday, September 10 and 11, 1957. There will be both morning and afternoon sessions. Chairmen will be: Dr. R. W. Armstrong, president, R.M.P.A., on Tuesday, and Dr. William Sargant, president, psychiatric section of the R.S.M., on Wednesday.

A *limited* number of tickets will be available on application to: The Registrar, Royal Medico-Psychological Association, 11 Chandos Street, Cavendish Square, London W. 1., England.

ELECTROSHOCK RESEARCH ASSOCIATION.—At its annual meeting in Chicago, May 12, 1957, the Association elected the following officers for the year ending March 31, 1958: Dr. Lothar B. Kalinowsky, president; Dr. George A. Ulett, vice-president; Dr. Paul H. Wilcox, secretary-treasurer; Dr. Ernest H. Parsons (ex-pres.), Dr. William L. Holt, Jr. (ex-pres.), Dr. John D. Moriarty, and Dr. Maximilian Fink, councilors.

The annual prize for the best research paper presented at the scientific session of the Electroshock Research Association in 1957 was awarded to the paper: "Electroencephalographic Studies on the Effects of Electro-convulsive Shock, Experimental Stress and Subcutaneous Injection of Atropine on Adult Albino Rats," by T. Fukuda, J. A. Stern, and G. A. Ulett, St. Louis, Mo.

AMERICAN NURSES' FOUNDATION, INC.—This Foundation, established in 1955 by the AmericanNurses' Association exclusively for charitable, scientific, literary and educational purposes, has delineated 5 broad areas in nursing research in which investigation is urgently needed. Scholars interested in submitting applications for research projects in this field are invited to send an abstract of their proposals to The American Nurses' Foundation, Inc., 2 Park Ave., New York, N. Y., by November 1 or March 1 of each year.

N. Y. STATE CRUSADE AGAINST CHRONIC ALCOHOLISM.—A $168,000 program to attack the problem of chronic alcoholism will be undertaken during the coming year by the New York State Interdepartmental Health Resources Board, it was announced recently. The program will be directed along 4 major lines—education, research, training, and clinical demonstration. There are an estimated 500,000 excessive or problem drinkers in N. Y. State, and the program will encourage physicians, nurses, social workers, educators and teachers, through fellowships of $300.00 each, to work on community alcoholism programs. This is just one of several projects planned by the Interdepartmental Health Resources Board to deal with alcoholism in N. Y. State.

CHARLES FREDERICK MENNINGER AWARD.—The American Psychoanalytic Association, at its annual meeting at Chicago, May 13, 1957, conferred the first Charles Frederick Menninger award on Dr. Charles Fisher, of the staff of The Mount Sinai Hospital of New York and training analyst of the New York Psychoanalytic Institute.

This annual award for original research in psychoanalysis was established a year ago by Dr. Karl A. Menninger and Dr. William C. Menninger of the Menninger Foundation as a memorial to their father, who was the founder of the original Menninger Sanitarium at Topeka, Kansas.

Dr. Fisher was thus honored in recognition of experimental work on the role of primary modes of perception in dream formation (J. of Am. Psa. Assoc., Vol. 2, No. 3, 1954; Vol. 4, No. 1, 1956), by which he was able to verify some of the basic theoretical principles originally postulated by Freud in his work on dreams.

NATIONAL LEAGUE FOR NURSING.—At a meeting held under the auspices of the National League for Nursing at the Morrison Hotel, Chicago, May 6, 1957, a special panel dealt with the nursing needs in all cases of long-term illness. It was emphasized that the wide scope of nursing responsibilities now

embrace assistance to the patient and his family with their economic, social and emotional needs, as well as the physical requirements.

MILWAUKEE NEURO-PSYCHIATRIC SOCIETY.—The annual meeting of the Society was held on Wednesday, May 22, 1957. Newly elected officers for the coming year are: president: David Cleveland, M. D., Milwaukee, Wis.; vice-president: Keith Keane, M. D., Sheboygan, Wis.; secretary-treasurer: Edward Carl Schmidt, M. D., Wauwatosa, Wis.; councilors: Isaac J. Sarfatty, M. D., Milwaukee, Wis.; and J. T. Petersik, M. D., Winnebago, Wis.

NEW YORK BUILDS STATE MENTAL HOSPITAL.—Plans have been made for the first new mental hospital to be built by N. Y. State in 25 years. The $70,000,000 institution, to accomodate 3,000 patients, is to be located in the Bronx, adjacent to the Albert Einstein Medical Center, the East Bronx General Hospital, and the East Bronx Tuberculosis Hospital.

According to operating plans outlined by Dr. Paul H. Hoch, Commissioner of Mental Hygiene, the hospital will serve the Bronx and its residents, providing both inpatient and outpatient care, including the new day hospital type of service, where patients spend the day participating in a regular therapeutic program and return to their homes at night.

The hospital will work in cooperation with the Albert Einstein College of Medicine, providing for the college resources for psychiatric teaching material and availing itself of the consultant services offered by the school's highly qualified specialists. It will be staffed with its own full time psychiatrists.

The Department of Mental Hygiene has worked closely with the architects on plans for the various buildings, which are based upon research into modern mental hospital construction, and incorporate a number of new features. All of the planning has been flexible to accomodate new developments in treatment.

The hospital will operate a school of nursing offering a complete 3 year basic course, and affiliate training for general hospital students.

STATUS AND IMPROVEMENT OF CLINICAL DRUG EVALUATION REPORTS.—A 22-page report has been issued on the proceedings of the working conference held by the recently established Psychopharmacology Service Center of the National Institute of Mental Health. The conference, held at Washington, D. C. in January was arranged in collaboration with THE AMERICAN PSYCHIATRIC ASSOCIATION.

The major purpose of the conference was to review the problems related to the reporting of clinical psychiatric drug evaluation studies and to consider the ways in which reports might be made more informative and useful. To this end, 5 committees were formed: 1. Patient Selection and Description; Chairman, Harry Freeman. 2. Evaluation of Change; Chairman, Ivan F. Bennett. 3. Description of the Treatment Setting; Chairman, Jay L. Hoffman. 4. Drug Therapy and Toxicity Reactions; Chairman, Heinz Lehmann. 5. Editors; Chairman, Roy P. Grinker.

A recommendation was made to establish a new journal to publish works concerning drugs used in the treatment of psychiatric illness and whatever clinical data are developed from pharmacological techniques applied to mental illness.

For further information, write to Jonathan O. Cole, M. D., Chief, Psychopharmacology Service Center, National Institute of Mental Health, Bethesda, Md.

NEW JERSEY NEURO-PSYCHIATRIC INSTITUTE.—The Edward Strecker Building at the N. J. Neuro-Psychiatric Institute, Princeton, N. J., was formally dedicated June 28, 1957, as announced by Dr. Robert S. Garber, medical director of the Institute. The building is named in honor of Dr. Strecker, Emeritus Professor of Psychiatry, University of Pennsylvania. Dr. Strecker serves as consultant to the Surgeons General, U. S. Army and U. S. Navy, and has also served as consultant to the Secretary of War for the Army Air Force. He has been recently appointed as the first professor of psychiatry at the Seton Hall College of Medicine and Dentistry, Jersey City, N. J.

Dr. Lauren H. Smith, physician-in-charge and administrator, Institute and Department for Mental and Nervous Disease, Pennsyl-

vania Hospital, Philadelphia, made the principal address at the dedication ceremony.

The new building will include a small unit for short-term treatment, another for longer-term treatment, and an outpatient division for 50 patients. The objective is a vitally improved service in the field of community mental health.

First American Congress of Legal Medicine and Law-Science Problems.—Dr. Hubert Winston Smith, director of the Law-Science Institute, The University of Texas, has announced the "First American Congress of Legal Medicine and Law-Science Problems" to be held at the Hotel Morrison, Chicago, Monday, July 8-20, 1957, for benefit of lawyers and physicians concerned with personal injury problems. The effort is the most ambitious one of its kind ever undertaken in an English-speaking country. It will feature 165 distinguished lecturers, drawn from the ranks of top medical specialists and trial lawyers. Each week the registrant may take a complete Basic Course or an Advanced Course without substantial duplication of instruction between the two weeks.

The Congress is an attempt to bring the authoritative medicine of the clinic and hospital into the arena of the Law by providing much-needed criteria of proof and instruction in the field of medicolegal trial technique. Each person registering for the course will be eligible to count the hours toward a Master of Law-Science Degree to be awarded by the Law-Science Academy of America. This will be the first time in history that lawyers and physicians have been able to work toward a common degree, based upon inter-relations of Law and Science.

First National Health Survey.—In May Public Health Service interviewers commenced a nation-wide survey of selected households in every state to obtain data regarding the amount of accidents, hospitalization, and medical and dental care occurring in the families and the length of time that the persons involved have been prevented from carrying on their occupations.

An average of 3,000 households will be visited per month, and the final statistics will be published for the nation as a whole, and for each of the 11 established geographic areas. The report will supply physicians, research workers, insurance companies and hospital personnel with urgently needed facts on the health of the general population.

Bibliography of Group Psychotherapy.—A comprehensive bibliography of published papers and books on group psychotherapy has recently been issued by the Beacon House Press, Box 311, Beacon, N. Y., edited by Raymond J. Corsini and Lloyd J. Putzey, and covering the years 1906 to 1956.

This new compilation supersedes the first published bibliography in the field of group psychotherapy by Dr. Joseph I. Meiers, issued in 1945.

Psychiatric Glossary.—The American Psychiatric Association Committee on Public Information has recently published a 48-paged psychiatric glossary of terms in an effort to transpose the technical terminology of psychiatry into popular language. Dr. Henry P. Laughlin, a member of the committee assembled a collection of terms, which the Committee subsequently defined in simple language. It is hoped that the glossary will aid reporters in presenting information about psychiatry to the general public, and clear up widespread misconceptions about psychiatric words and concepts.

The new A.P.A. glossary is the first of its kind since the publication of Richard H. Hutchings *Psychiatric Word Book* in 1930. Copies may be obtained from the Washington office of the A.P.A. for $1.00.

Psychiatric Research Reports No. 6.—Papers presented at the Western Regional Research Conference of the A.P.A. held in Los Angeles January 26-27, 1956, are now available in printed form from the Washington office of the A.P.A. These papers were arranged around the general topic, "Application of Basic Science Techniques to Psychiatric Research" and are edited by Dr. Robert A. Cleghorn, Montreal. The topics of individual papers cover a wide range, from the strictly laboratory type of investigation to the clinical to the behavioristic sciences as represented by investigations of the whole animal organism.

OFFICIAL REPORTS

COORDINATING COMMITTEE ON THE TECHNICAL ASPECTS OF PSYCHIATRY

This report to the membership of the A.P.A. May 14, 1957, covers the highlights of 8 Committees on the Technical Aspects of Psychiatry. All these committees met last fall. Seven met again earlier this week, and the eighth committee had a special meeting in March. In addition, the chairmen of these 8 committees have met as a group to discuss mutual problems and to plan overall strategy, to coordinate their work with that of other committees of the Association.

A very brief report of the activities of each Committee prior to the May 1957 meeting follows:

I. *The Committee on Aging;* Ewald W. Busse, Chairman, had its first meeting in October 1956. Plans were formulated to include an evening round table discussion during the annual meeting devoted to the "Psychiatric Aspects of Aging, Prevention and Treatment," and a symposium concerned with the problems of aging. A questionnaire was distributed to the members of the A.P.A. via *The Mail Pouch* to determine the extent of interest and activities among the members in this field. Approximately 1,100 questionnaires were returned indicating considerable interest. The data so obtained are being analyzed and the results will be available at an early date.

Acting upon a specific request, attention is being given to the collection of information as to requirements for the care of the aged in mental hospitals. The committee will cooperate with the editorial staff of *Mental Hospitals,* anticipating that an issue of this publication will be devoted to this complex subject.

II. *The Committee on Child Psychiatry:* George E. Gardner, Chairman. "During the past year this committee has been working in two areas: 1. that of residence inpatient psychiatric treatment of children; 2. the rotational training program in child psychiatry for fellows in training in general psychiatry.

The Committee has met with the Committee on Medical Education and are about to make recommendations to the Council regarding block or concurrent training programs for fellows in training in general psychiatry who wish to obtain orientation and education in the children's field."

III. *The Committee on the History of Psychiatry:* Robert S. Bookhammer, Chairman. "In addition to our meeting in the fall of 1956, our committee also had a meeting on March 9, 1957. Our several committee members have been working throughout this year on a joint project and there is still work to be done in preparation for the exhibit on Historical Landmarks in Research in Schizophrenia in the United States, to be presented at the International Congress on Psychiatry in Zurich, Switzerland, September 1957. It will be annotated in both English and French following the custom of previous international meetings. The exhibit is not definitive nor comprehensive but is designed to show the scope and quality of research since 1800."

IV. *The Committee on Medical Education:* Milton Rosenbaum, Chairman, "The committee sponsored and organized a Round Table meeting during the May 1957 meetings on 'Pros and Cons' for a Straight Psychiatric Internship, or a Mixed Internship with the Inclusion of Psychiatry." The subject of medical education during the internship is very much in the limelight these days and therefore the Round Table is quite timely.

Dr. Brian Bird of the committee, has been appointed to serve with the *ad hoc* committee of the A.P.A. on General Practice in liaison with the American Academy of General Practice.

Several meetings have been held between the *ad hoc* committee of the A.P.A., made

up of the members of the Committee on Medical Education, and the *ad hoc* committee of the American Psychoanalytic Association, to discuss problems of mutual interest regarding psychoanalytic training during the residency period. The two *ad hoc* committees met again during the May meetings."

V. *The Committee on Public Health:* Roger W. Howell, Chairman, "1. Members of the Committee reviewed summary reports of different community surveys prepared by Dr. Blain and his staff, in preparation for discussing their future as a regular activity of the Central Office staff. A member of this committe participated in the survey conducted in the city and county of Saint Louis, Mo.

2. The Committee prepared a summary of its opus on the relationship between infectious diseases and mental retardation, which summary is to be presented at the 1957 meeting of the American Association for Mental Deficiency. It is hoped that it will be published.

3. Sponsored jointly with the Mental Health Section of the American Public Health Association a panel presentation on the subject "Public Health Aspects of the Tranquilizing Drugs." A member of the committee presented a summary of the presentations. This panel presented their material at the annual meeting of the American Public Health Association at Atlantic City in November, 1956.

4. Committee members continued their reviewing of the material so far assembled for our booklet for public health administrators entitled "How To Do It," referring to community mental health. It is hoped that the committee following discussions in May will be ready to prepare the booklet in its final form."

VI. *The Committee on Rehabilitation:* formerly known as the Committee on Medical Rehabilitation, Benjamin Simon, Chairman. "In addition to considering, as it does regularly, the progress of the Pilot Study on Rehabilitation (which is now in the last part of the evaluation phase) and the Round Tables for the next and succeeding years, the Committee undertook to set forth (at the request of Lucy D. Ozarin, M. D., director of the Architectural Study Project) the philosophy of treatment which might become the ultimate basis for architectural development. The Committee will continue in this activity for the next year, at least.

The Committee undertook to act as an advisory committee to the study on Adjunctive Therapies being set up at Washburn University, Topeka, Kansas, under the direction of Dr. William H. Key, supported by a grant from the office of Vocational Rehabilitation. At its next meeting, the Committee will have as its guest Dr. Key, who will discuss the broad outline of the study.

The Chairman of the Committee represented THE AMERICAN PSYCHIATRIC ASSOCIATION on the advisory committee on Physical Therapy Education of the Council on Medical Education and Hospitals of the American Medical Association which met in Chicago on February 12, 1957. Dr. Simon was made a member of the four-man executive committee of the advisory committee, which is now fully organized and will function continuously.

A similar advisory committee on Occupational Therapy Education is being formed by the American Medical Association and the appointment of Dr. Simon to this committee has been recommended by the Council."

VII. *The Committee on Research:* Nathan S. Kline, Chairman; "1. A survey is being made of the positions available in state hospitals for research in psychiatry, in respect to both number, salaries and availability.

2. Ciba Pharmaceutical did not renew its support for the Psychiatric Research Reports and negotiations (subject to approval of Council) are being completed with another pharmaceutical house.

3. Five years of support were obtained for a research lectureship, to be known as the Adolf Meyer Research Lecture to be given at the annual meeting.

4. Preliminary meetings have been held and plans are being formulated for a National Conference on the subject of Psychiatric Research, its direction, financing, and training of personnel.

5. Regional Research Conferences were held in Philadelphia, Syracuse, and one is

planned for later this month at the University of Oklahoma.

6. The Committee on Research co-sponsored a meeting with the American Public Health Association on problems involving epidemeology of mental disorders at the annual meeting of the AAAS."

VIII. *The Committee on Therapy:* Paul H. Hoch, chairman, has continued to discuss "quite a number of issues which were referred to the Committee either by other committees of the Association or by outsiders.

The Committee was also engaged in revising the standards of electroshock therapy which had to be brought up to date.

The Committee began to organize a guide for physicians to psychiatric services which will be country-wide. Material has been collected about some of the states and this work is continuing. We hope that when it is completed a directory can be organized giving the main psychiatric resources of the United States insofar as they relate to the general practice of medicine.

The Committee also engaged in discussions on the possibility of organizing a short manual on psychiatric therapies indicating their proper places in present psychiatric practice. No final decision was reached whether or not the Committee would undertake this project.

In summary, I wish to point out that these various committees have not only been working closely with other committees of our Association, but also with other state and national organizations. I wish to take this opportunity to publicly thank the chairmen and the members of these committees who have worked so faithfully and arduously during the past year. I am sure our entire organization will benefit for many years as a result of their splendid contributions.

FRANK J. CURRAN, M. D.,
Chairman.

AEROPHOBIA

Some are as much afraid of fresh air as persons in the hydrophobia are of fresh water. I myself had formerly this prejudice, this aërophobia, as I now account it. And dreading the supposed dangerous effects of cool air, I considered it as an enemy and closed with extreme care every crevice in the rooms I inhabited. Experience has convinced me of my error. I now look upon fresh air as a friend; I even sleep with an open window. I am persuaded that no common air from without is so unwholesome as the air within a close room that has been often breathed and not changed. . . . And I find it of importance to the happiness of life, the being freed from vain terrors, especially of objects that we are every day exposed inevitably to meet with. . . . It is to be hoped that in another century or two we may all find out, that it [fresh air] is not bad even for people in health.

—BENJAMIN FRANKLIN

FORGETTING

To know how to forget is more a matter of luck than of skill. The things which are better forgotten are those we remember best; memory is not merely a rogue in failing us when it is most needed, but a fool in turning up at inconvenient times; in matters which will prove troublesome, it is long, and in those which ought to be a source of pleasure it is heedless. Sometimes the cure for misfortune consists in forgetting it, and the remedy is forgotten; it is advisable, therefore, to train the memory to good habits, for it can turn life into a heaven or a hell.

—BALTASAR GRACIAN
(The Oracle, 1647)

BOOK REVIEWS

SLEEP. By *Marie Stopes*. (New York: Philosophical Library, Inc., 1956. $3.00.)

Dr. Stopes prefaces her book with: "No expert in the world really understands sleep or knows what it is. Nor do I: but in spite of that I feel that in this book, small though it is, I do contribute some facts and fancies many people may like to know."

After this the author then fails to distinguish that which she considers fact from that which was intended to be more fanciful. In this reviewer's opinion the latter predominates throughout. Since it is the curse of error that at least two statements are required to refute every one presented originally, and since there are so many ideas that are not validated, this book can best be reviewed by quoting a few of these passages for the scrutiny of the reader:

"Personally, I think it is a crime of the first magnitude to wake anyone, save in an emergency. I should lay down as an absolute rule that *no* child should be waked, not even a child of school age. Sleep is of *far* more value to a child than lessons. Anyone who continuously finds it necessary to use an alarm-clock, or be waked, should realize it is a sign that more sleep is needed, and should go to bed earlier." (pp. 5)

The book abounds in personal opinions such as this:

"One may have to sleep on the bare ground, or on a board, and millions of people do. We are, however, civilised communities and should make use, every time we can, of the best that our civilisation provides for us. A soft mattress is one of the good things we can now readily obtain.

"But do *not* go too far with the idea that modern things are necessarily really good and civilised. Often they lean backwards. The soft foam rubber mattress is an example of a modern 'advance' to be avoided by all who value their health. It is pernicious. Do *not* use any rubber mattress, and do *not* have rubber-tyred wheels on your bedstead. Why? Because rubber is an insulator, and cuts you off from electric currents of the earth with which you should be in contact. Many, sadly many, people are insulating themselves incessantly. Rubber-soled shoes all day, and then rubber covering to their floors, small wheels with rubber tyres on their beds—alas, poor things, they are being devitalised. No wonder millions at the end of the day feel limp and exhausted yet neither ready for, nor able to, sleep." (pp. 31)

Is this fact or fancy? The author sounds serious! This question might be passed over if the book then presented a few validating facts, but two pages later one reads:

"Beds are generally placed to suit the build of the room but this is often wrong. The place of the bed should be determined by something more fundamentally important, that is the direction of the North. The head of the bed should be north or south, and the bed should extend between these two poles. It is comparatively unimportant whether the head or the feet are at the north end of the bed, but it is very important indeed that the extension of the body should lie along a line either south-north or north-south. Few people are now aware that we do not have only five senses, as children are senselessly taught in school, but we used to have, and some few people still have, other senses, and one of these is a sense of the north. It is just as clear and definite a sense as any other. One *sees* the wall in front of one, one *hears* the bird calling, and one *magnetates* the north. Magnetates? A new word, you say. Yes. A new word, and I am coining it here and now for a very real sense. I know about it, for I possess it. It is in my spine that I magnetate the north, between my shoulder-blades and hips. I used to have this sense so intensely that I could be blindfolded in a fog on a desolate moor and twisted round a great number of times, and could at once point to the exact north. This was tested by geologists with a compass and was often of great use to me. Since my back was broken and my abdominal walls cut, I am not so acutely sensitive to the north as I was, but still I generally feel it. If by chance I visit a house where my bed is set east-west, even though there may be nothing in the curtained room to indicate this, once I lie in the bed trying to sleep, I very soon suffer and so find out. I do not sleep till I have popped out of bed and shifted it to the north and south direction. If it is too heavy for me, I lie diametrically or slantwise across it till I am north and south, and even though this may make the bedclothes rather uncomfortable, I am then able to sleep."

Anticipating the difficulties her colleagues might have swallowing the preceding statements, the author rebuts as follows:

"There are many, certainly the majority of ordinary people and also most medical doctors, who will scoff at the idea that the north and south placing of any bed is important. That does not show that they are wise, or right, or 'scientific'; it merely proves that they are ignorant of one of the existing human faculties. Many people who are quite unconscious of the faculty have a disturbed feeling which appears unaccountable when their beds are wrongly placed. I think this is because they feel subconsciously what some feel consciously.

"In all my life I have never found a living person who feels the north as acutely as I do . . ."

Concerning the fabric of bed clothes the author does not hesitate to decree:

"It is iniquitous that cellulose fabrications should be allowed to call themselves 'pure silk' and so deceive women into thinking they are getting silk when they are not. The only pure silk in the world is made by silk-worms and gives indescribable com-

fort undreamed of by the wearers of 'silk' and nylon. Real silk-worm silk is a delicate web for the capture of sleep."

About the effect of daylight saving time on sleep the author has more firm opinions. Another crime has been perpetrated against the sleep of civilized man by this practice.

Among causes for insomnia the author lists cold feet, noise, grief, worry, etc. Comparatively speaking, this is a refreshing factual interlude in the fancy replete in *Sleep*.

For those who intend to spare themselves the soporific chore of reading *Sleep* I quote a final gem:

"People who find difficulty in going to sleep, and have used all the usual dodges without success, might try the effect of having a large grandfather clock in the bedroom. A small, quick-ticking grandfather clock is no use. Before buying it, test it by having the ticks and your own heart-beats per minute each counted when you have been sitting quietly in a chair for five minutes. Unless the clock's ticks are materially slower than your own heart-beat, do not buy it. To act as a soporific your clock must be *markedly* slower than your own heart-beat when awake, or it will not be slower than your heart-beat when yours is slowed down in sleep. The effect of the slow grandfather clock is superlatively soothing and sleep-enticing."

JOSEPH J. PETERS, M. D.,
Philadelphia, Pa.

KLINISCHE ELEKTROPATHOLOGIE: I. Kritische Sammlung Elektropathologischer Gutachten Aus Interner Sicht. By *Dr. S. Koeppen;* II. Die Neurologie Des Elektrischen Unfalls Und Des Blitzschlags. By *Dr. F. Panse.* (Stuttgart: Georg Thieme Verlag, 1955. DM 33.-)

This work on Clinical Electropathology is part of a series on social and industrial medicine. The volume consists of 2 monographs by separate authors presenting essentially the same subject from different angles. The 2 independent monographs reached the publisher at about the same time and were united in a volume purposely without integrative editing by the authors. The texts complement rather than repeat each other. Slight differences in the approach would benefit rather than confuse the critical reader, in the opinion of the editors.

The first monograph, by Dr. Koeppen, bears the title, "A Critical Review of Electropathological Case Histories with Special Regard to Medico-legal Problems." It is a systematic presentation of the subject in a textbook-like manner, woven around case histories. The first chapter deals with physical and technical data. The clinical sections discuss cardiac, vascular, endocrine, respiratory, autonomous and central nervous disturbances in their relationship to electrical accidents. The clinical entities are presented not only as sequelae of electrical traumata, but also the outcome of electrical accidents are discussed in patients with pre-existing conditions in most of the above-mentioned categories.

The second monograph, by Dr. Panse, bears the title, "The Neurology of Accidents Caused by Industrial Electricity and by Lightning, Including a Chapter on Electromagnetic Waves and Atomic Energy." This monograph like the first one starts with an electrophysical and technological introduction. In the clinical portion separate sections deal with the initial and the late results of electrical accidents. Of some interest to psychiatrists is the well documented discussion of the psychological impact of being struck by lightning or hit by industrial electricity (e.g. a very short episode of mild to severe impairment of awareness was frequent, retrograde amnesia however was unusual; occasional sensory experiences occurred similar to the epileptic aura; psychological reactions varied according to the personality and the circumstances; a temporary stupor state with inability to move was common when hit by a bolt of lightning, even if injury was light). The neurological and pathological sequelae discussed include cerebral oedema, cerebral degenerations (mostly basal ganglia), brain injuries due to burning, progressive atrophies of the spinal cord, also thermoelectric damages of the spinal cord and peripheral nerves. Therapeutic electric-shock receives but a few passing remarks in this book on clinical electropathology. The reason for this apparent neglect is a gratifying one: i.e. electroshock therapy is hardly an electrical hazard. The only neurological sequelae mentioned by Panse were the rare occurrences of an activation of latent epilepsy following a series of electroshock treatment (about 60 cases in the literature), and occasional cerebrovascular accidents during therapeutic convulsions.

Both monographs are well illustrated and documented by case histories, photographs, charts and diagrams. The presentation of the subject is thorough and authoritative, but peripheral to the interest of the psychiatrist. However, for those physicians who deal with the management, the forensic aspects or compensation of electrical casualties this volume is an excellent text and reference book.

A. BONKALO, M. D.,
Toronto Psychiatric Hospital.

A MANUAL OF PSYCHIATRY (3rd. Ed.). By *K. R. Stallworthy.* (New Zealand: N. M. Peryer, Ltd., pp. 324, 1955.)

This volume represents a brief textbook of psychiatry, obviously written for the beginner and apparently written for not only doctors but nurses and others working in a psychiatric institution. On the whole, the material is presented in accordance with the best thinking of American psychiatry and is well up to date.

The first chapter deals with "admissions" and "discharges" and is a discussion of the situation in New Zealand. You can be discharged as "recovered," "relieved," or "unrecovered." There are 2 brief chapters on "The Mind in Health" and the other on "Abnormal Psychology" which do not give the material in much detail. In the chapter on "Abnormal Psychology" less than 2 pages are given to psychoanalytic formulations. Likewise, in the chapter on "Psychotherapy" about 3 pages are

given to psychoanalysis, with about one of these pages devoted to the ideas of Jung and of Adler.

As a textbook for nurses and attendants and giving some of the material of a special textbook of psychiatry it is too condensed, oversimplified, and hardly to be/compared with our best American textbooks on the subject.

K. M. B.

Fragments of an Analysis With Freud. By *Joseph Wortis.* (New York: Simon & Schuster, 1954. $3.00.)

Twenty years after the event, Dr. Wortis has written one of the most fascinating and at the same time, important documents in modern psychiatric history. It is the almost verbatim account of approximately 4 months of didactic analytic sessions with Sigmund Freud. Because of the nature of the relationship, and the character of the analyst and analysand, there apparently resulted greater revelation of the former's thought and feeling than of the latter's. No matter what the ultimate judgment of history, Freud is one of the most important figures in psychiatric history and indeed in arts and letters, and a cultural figure of the first magnitude. A book, therefore, which gives intimate details not only of his very human characteristics, but at the same time reveals Freud's thoughts on his discipline and the world, as well as his colleagues, makes for reading which is almost breathless in pace.

The author, soon after becoming the recipient of a rather unique and important fellowship under the supervision of Havelock Ellis and Adolf Meyer decided that some psychoanalytic experience would be valuable to him. Arrangements were made with Freud and thus began what was probably one of the strangest analytic relationships extant. From the very beginning, the author kept a series of extensive notes on the interviews including verbatim quotations of the great teacher. The book is replete with little revealing remarks such as the importance of the classical chair-behind-the-couch arrangement to assure ease in the patient, "besides, I don't like to have people stare me in the face." It is greatly tempting to offer one quotation after another on psychiatry, art, finance, women, literature, America, christianity, physiology, jews, communism, colleagues, and above all, himself.

At the outset financial difficulties arose because fellowship funds were not immediately forthcoming and Freud's concern about his fees made matters somewhat touchy. This was not helped by the author's later request for a receipt, something one simply did not ask of a continental physician. The brash young American was apparently sufficiently irritating and at the same time intellectually stimulating that Freud, who was never known for his passivity during analysis, poured forth a wealth of comment on every topic under the sun. By actual count, almost a hundred different areas are enumerated in the index. Freud was an old man, ill, irritable, but still intellectually vigorous and interested in his environment. He was vain, dogmatic, and at times petty, but always interesting. His biting and almost vicious comments on his colleagues, Stekel, Hirschfield, Ellis and others are, if nothing else, refreshingly frank.

It is difficult not to agree with Havelock Ellis's remarks after reading the collected notes, "I consider the notes most valuable and that they ought someday to be published after Freud's death. . . . Their value is that they constitute an analysis of Freud and a precise revelation of his technique. I do not suppose that any similar record—even if it exists—will be published, as the ordinary patient would not of course care to give himself away." Adolf Meyer concurred with this statement and so must the reader.

Benjamin Pasamanick, M. D.,
Columbus, Ohio.

Medical Aspects of Traffic Accidents. Proceedings of the Montreal Conference. Edited by *Harold Elliott.* (Sun Life Assurance Company of Canada, 1955, pp. 511. $7.00.)

This book of 511 pages consists of the proceedings of the conference held at McGill University, May 4 and 5, 1955. The subject matter is broad in scope and consists of the papers and discussions of the various participants in the conference.

This conference with Dr. Harold Elliott as the driving force represents a new and worthwhile approach in medicine marking a transition from the position of repairing the injured to an attempt at understanding the basic problem with prevention as the ultimate aim.

Although there have been previous approaches to this problem by various specialties within the profession attacking that section of the problem apparently related to their field of knowledge, this represents the first over-all gathering together of a large and relatively heterogeneous group within the profession to discuss all aspects of traffic accidents that have apparent medical significance.

Because of its very nature the subjects dealt with have little in common but the central theme of a contribution to our knowledge of understanding, preventing and alleviating the results of traffic accidents.

Of greatest interest to psychiatrists will be Chapter 8 dealing with the "Behaviour Aspects as a Cause of Traffic Accidents" with the subtitle of "The Role of the Psychiatrists." This consists of 2 papers, the subsequent discussion and the recommendation forwarded by the group. Dr. A. Canty presents the experience of the Psychopathic Clinic with the Recorders Court in Detroit, Mich., with an interesting breakdown of the psychiatric diagnoses encountered in a psychiatric clinic functioning on a referral basis. The report by Dr. L. Brody of personality studies carried out on a sample of cases referred because of traffic violations as compared with a group of "good" drivers. The preliminary findings reported support amply the concepts derived by more restricted approaches to the problem; namely, that "the basic problem is psychological, a matter principally of emotional and social adjustment."

While this book does not make easy reading be-

cause of the nature of its origin, it does represent an outstanding approach to a problem which previously received little attention and encouragement in medicine. It should serve as a most valuable reference source as well as a preliminary model for future studies.

G. E. Hobbs, M. D.,
University of Western Ontario.

Lewis Carroll. By *Derek Hudson*. (London: Constable; Toronto: Longmans, Green & Co., 1954. $4.25.)

Lewis Carroll died in 1898. He was spared the ignominy of the twentieth century that Saint-Exupèry hated so fatally. There must have been affinity there——*Alice* and *Le Petit Prince!*

Hudson's book was needed. It is an excellent antidote to the pronouncements of Florence Becker Lennon in her book, *Victoria Through The Looking Glass* (scholarly as it is, with its 22 pages of bibliography). New York Times reviewer Orville Prescott says that despite her "prodigies of research" the Lennon book is "disappointing and tedious." He speaks of her "fruitless Freudian probings" and her "heavy-handed psychiatric jargon." These gratuitous interpolations by the author impair a book which otherwise contains useful information about Lewis Carroll.

The Hudson book does not undertake such interpretations. It is factual, objective, lets the story tell itself——altogether a wholesome and delightful book, undoubtedly the best study of that unique personality, Lewis Carroll, to date. The *Diaries of Lewis Carroll* published in 1954 and much unpublished material in possession of the family, as well as a great many letters from other sources and a mass of documents recently discovered at Christ Church, Oxford, were all made available to the author who feels that his work may be regarded as the definitive biography.

The word unique is not used idly in speaking of Lewis Carroll, not in the sense of uncommon or rare but rather in the sense of the only one of the kind. A full consideration of this various man can hardly fail to establish this estimate. He was a polymorph artist, an inimitable story teller for children up to age 99, a famous photographer, when phototography was new (Helmut Gernsheim calls him "the most outstanding photographer of children in the 19th Century"), clever illustrator (he did the pictures for the original manuscript of *Alice*), poet, author, devotee of the theatre and opera; in addition, a scientist, authority in mathematics and logic (lecturer in mathematics at Christ Church, published *Symbolic Logic*); besides all this, a clergyman. In this profession he followed in his father's footsteps; also it was necessary to be in orders to become an Oxford don in the mid-nineteenth century.

Charles Lutwidge Dodgson, born 1832, was the third of 11 children and the eldest son. All his life he was a stammerer and this handicap prejudiced both his teaching and preaching. At 13 he was sent to Rugby where he spent almost 4 unhappy years. His superior abilities won no respect from his fellow students. He was sensitive and shy and a teasing victim. At 18, just after being entered at Oxford, he suffered a sore loss in the death of his mother, many of whose quieter, feminine qualities were reflected in her son.

Fondness for children was a dominant characteristic of Lewis Carroll from his early years. He "carried his childhood with him." Children were naturally drawn to him and his extraordinary gift for entertaining them endeared him to them, and their attachment to his person amounted at times "almost to adoration." He once remarked, "children are three-fourths of my life." And on another occasion he spoke of "the hundred or so of child-friends who have brightened my life." The children were almost exclusively preadolescent little girls, and as maturity approached interest on both sides as a rule subsided. As he explains in one of his letters, "Usually the child becomes so entirely a different being as she grows into a woman, that our friendship has to change too: and *that* it usually does by gliding down, from a loving intimacy into an acquaintance that merely consists of a smile and a bow when we meet!" In a few cases child friendships continued mutually to the end of his life. In an appendix to the present book will be found letters from several of his child friends written after his death describing those delightful and idealized early experiences that lived on as cherished memories. With the rare exception he was not interested in little boys. "I am fond of children," he said, "except boys. . . . To me they are not an attractive race of beings."

It is questionable that Lewis Carroll felt for any woman the kind of love that commonly leads to marriage. From his twenties on he occasionally spoke——and that not casually——of the improbability that he would ever marry. He never did. Ellen Terry was one of his child friends and his devotion to her and her art continued through the years. In a letter in later life Ellen Terry wrote, "He was as fond of me as he could be of anyone over the age of ten."

Lewis Carroll was an aesthete and a perfectionist. He was a rigid self-disciplinarian. He examined his motives with utmost scruple and his integrity was unquestioned. He worshipped beauty. In Cologne Cathedral he was so overcome emotionally by the majesty of the soaring columns and noble arches that he "sobbed like a child." And it was children that he loved most, children in "that blissful innocent state" of their early years; with his dual nature he could associate with them as of their own age level and also as the protective grown-up to guide and amuse.

Of all his child friends it was Alice Liddell, daughter of the Dean of Christ Church that impressed him most profoundly. When he first saw this lovely child she was only 4. "I mark this day with a white stone," he said. This was his way of indicating memorable occasions. It was to her and for her that he told and wrote the marvellous stories in the *Alice* books. She was their inspiration, and but for that ideal relationship these stories would

never have been written and some of the finest things in the world's literature would not have come into being.

Professor York Powell, an Oxford contemporary, has drawn a fine pen picture of Lewis Carroll: "The quiet humour of his voice, a very pleasant voice, the occasional laugh——he was not a man that often laughed, though there was often a smile playing about his sensitive mouth——and the slight hesitation that whetted some of his wittiest sayings . . . his kindly sympathies, his rigid rule of his own life, his unselfish love of the little ones, whose liegeman he was, his dutiful discharge of every obligation that was in the slightest degree incumbent on him, his patience with his younger colleagues, . . . his rare modesty, and the natural kindness which preserved him from the faintest shadow of conceit, and made him singularly courteous to every one, high or low, he came across in his quiet academic life,——a good teller of anecdote, . . . a fantastic weaver of paradox and propounder of puzzle, a person who never let the talk flag, but never monopolized it, who had rather set others talking than talk himself, and was as pleased to hear a twice-told tale as to retell his own store of reminiscence. . . ."

And the late Viscount Simon in his recollections in an appendix: "The truth about Lewis Carroll is that he was always engaged in genially pulling somebody's leg and he did this very amusingly by propounding a comic mathematical problem to a non-mathematical mind. . . . I think he found the Canons of Christ Church easy meat!

"His parody of Euclid's third 'Postulate' is a good example of his wit. The Postulate runs: 'Let it be granted that a circle can be described about any centre at any distance from that centre.' He transformed this into: 'Let it be granted that a controversy can be raised about any subject at any distance from that subject.' How true that is!"

The author of this book covers, with full documentation, all phases of the life and work of this remarkable mathematician-logician-poet-photographer-storyteller-friend and entertainer of children, who at home was C. L. Dodgson, but to the ends of the world was Lewis Carroll.

It is pleasant to recall that in 1932 Mrs. Alice Liddell Hargreaves, at the age of 80, left her English home and came to the United States to attend a series of celebrations of the 100th anniversary of the birth of Lewis Carroll, and to receive from Dr. Nicholas Murray Butler, president of Columbia University, the degree of Doctor of Letters. She recalled the incomparable and unforgettable hours when she, a little girl of 10, listened to Lewis Carroll spinning his magic to the delight of her and her sisters. "He was the kindest of people to small children," she said.

Persons in the United States have more than one reason for celebrating the Fourth of July. July 4, 1862 was another birthday. It was on a river-party that day that the *Alice* stories began.

To the T.B.M. or other citizen troubled by the *Sturm und Drang* of our unquiet times and who feels that possibly a little psychotherapy might do him good, one might well, in agreement with the views of our late colleague, Paul Schilder, recommend as a tranquilizing potion a few pages from *Alice in Wonderland*.

This book about Lewis Carroll should have been reviewed earlier, but it came to hand only recently.

C. B. F.

THE CLINICAL INTERVIEW. VOL. II: THERAPY. By *Felix Deutsch* and *William F. Murphy*. (New York: International Universities Press, 1955. $7.50.)

This second volume of Drs. Deutsch and Murphy's ambitious undertaking is devoted to therapy and is subtitled, "A Method of Teaching Sector Psychotherapy." Unfortunately the impression that the contents of the first volume did not justify the comprehensive title is not corrected by the second part, and there is no indication that further volumes are in preparation (Am. J. Psych., 113: 95-96, 1956). The first chapter presents an erudite and concise outline of the method, but it seems to this reviewer that the distinction between sector psychotherapy and other psychotherapy is much more meaningful to the advanced and experienced therapist than to the trainee. The same must be said of the therapeutic sessions presented in subsequent chapters. They give evidence of the greatest skill in interviewing based on extraordinary familiarity with personality dynamics and analytic concepts, which cannot be copied or acquired quickly by relatively inexperienced trainees and young psychiatrists. There is no discussion of the teaching value of these interviews, let alone a critical evaluation of either the teaching method or of the therapy itself. The absence of such discussion is most striking at the end of Chapter 5 which presents an interview with a borderline psychotic patient, one that could hardly be considered therapeutic in retrospect. In the brief follow-up statement the reader learns that this patient later becomes psychotic, but the interview is entitled "Reticence in the Interview," as if only the technical aspects were to be considered. Neither volume dispells the general impression that abbreviated forms of therapy require deeper understanding, greater skill, and wider experience than prolonged and more detailed psychotherapeutic efforts. In the latter the definition of goals may be less precise and can evolve gradually while working with the patient. This is easier for the trainee whereas early and therapeutically realistic definition of goals and of therapy sectors requires the skill, experience, and wisdom of the authors.

The reader who expects more than a collection of expertly conducted interviews performed by exceptionally skilled therapists using their particular methods will be disappointed. While an attempt is made to define sector psychotherapy accurately and as distinct from other approaches, the contents of this volume are not convincing that such a separate designation is justified. Equivalent therapeutic work, possibly less well schematized and formulated and not as well documented, is being performed in many

institutions. (French & Alexander, *Analytic Therapy;* Lidz & Fleck, *Psychosomatic Medicine,* 3: 103, 1950). However, as a presentation of psychoanalytically oriented therapeutic interviews and selected psychosomatic case material this volume is highly recommended.

STEPHEN FLECK, M. D.,
Yale Psychiatric Institute.

A GUIDE TO PSYCHIATRIC BOOKS. (Second Revised Edition). By *Karl A. Menninger, M. D.* (New York: Grune & Stratton, 1956, 157 pp. $4.75.)

In the 5 years since the publication of the first edition of *Guide To Psychiatric Books,* several related fields and subdisciplines in psychiatry have acquired substantial published material, which this second edition incorporates. Menninger has dropped his earlier method of starring preferred books, and re-arranged the table of contents to indicate the specialties that have risen in status during the past half decade.

The basic reading list for psychiatric residents is retained at the conclusion of the book, somewhat revised. A special reading list is offered for those interested in the interrelationships between religion and psychiatry.

Since this *Guide* is the only current comprehensive reading list in psychiatry published in book form, it will probably go into several editions. Only a person who has attempted to select the best that has been written in psychiatry would be in a position to quarrel with the selections here presented. Dropping the star-system in this edition further relieves the reviewer of the task of challenging marked preferences. All in all, the range of this guide is admirable, in view of its length (157 pp.). It is highly recommended.

A. C.

TRANSVESTISM: MEN IN FEMALE DRESS. Edited by *David O. Cauldwell, M. D.* (New York: Sexology Corporation, 1956. $3.00.)

This slim volume consists of 4 articles by medical sexologists, 4 by other writers and 11 autobiographic statements. Most of these have been reprinted from the journal, *Sexology.* It is pointed out that transvestism occurs more frequently in the male than in the female. The theories of causation which vary from physical to psychological, and mixtures in between are discussed. In classification the following types are mentioned: 1. heterosexual, 2. homosexual, 3. bisexual, 4. narcissistic and 5. asexual. The autobiographies illustrate clearly how often the patient's mother wanted a girl and literally raised her son to be one. Narcissistic, erotic, and compulsive features are also seen.

This book contributes little of value to the psychiatric profession as it is published for the general public. One feels that a well organized non-repetitious article in pamphlet form would have been more useful.

ERIC T. CARLSON, M. D.,
New York Hospital,
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Medical College.

METHODISCHE PROBLEM DER KLINISCHEN PSYCHOTHERAPIE. By *Dietrich Langen.* (Stuttgart: Georg Thieme, Verlag, 1956.)

The term "clinical psychotherapy" as used by Langen in his book means psychotherapy in an inpatient setting as contrasted to the usual outpatient psychotherapy. The author, a disciple of E. Kretschmer in the department of psychiatry of Tübingen University, gives a comprehensive account of the methods used and the results achieved by him and his co-workers on a large number of neurotic and depressed patients. The sheltered climate of a hospital, the use of physical methods and group treatment in addition to individual psychotherapy make short-term treatment possible. Analysis of the actual conflict situation as well as of the personality structure marks the first step in the psychotherapeutic approach. On the basis of this analysis a formula is worked out which suggests the solution of the patient's actual problem. This formula is repeated to him in a hypnotic relaxation training program which follows largely the method described by I. H. Schultz. Group treatment is used for this relaxation training. Group discussions and psychodrama form other important parts of the group therapy. Subcoma insulin, fever and sleep treatment are used as adjuvants of the psychotherapeutic procedures. The technique of subcoma insulin therapy is described in detail. According to Langen, its value for a dynamically oriented psychotherapy is greater than that of the other physical methods because it facilitates drive processes and at the same time lowers the level of mental activity, thus leading to a dissociation most favorable for a dynamic understanding of the patient and his problems.

The book is writen by a clinician experienced in clinical psychiatry as well as in psychotherapy. It should prove worthwhile reading for everybody interested in psychotherapeutic problems particularly in an inpatient setting.

V. A. KRAL, M.D.,
McGill University,
Montreal, Canada.

DAS AUTOGENE TRAINING (KONZENTRATIVE SELBSTENTSPANNUNG) Versuch Einer Klinisch-Praktischen Darstellung. By *Prof. J. H. Schultz.* (9th Ed.) (Stuttgart: Georg Thieme Verlag, 1956. Price DM 29.-)

The ninth edition of this book differs very little from the previous one, reviewed in this journal (see Vol. 111, pp. 634, Feb., 1955).

A few elaborations were added to the management of the "first manoeuvre" ("Erstübung") in the exercise of "concentrative self relaxation." Also a few new data were inserted in the clinical and theoretical sections of this work. The more important ones deal with the changes in heat regulation as well as with shifts in the blood count and blood sugar content brought about by the physiological actions of this therapeutic technique.

A. BONKALO, M. D.,
Toronto Psychiatric Hospital.

ELECTRODIAGNOSIS AND ELECTROMYOGRAPHY. Edited by *Sidney Licht*. (New Haven: Elizabeth Licht, pp. 272, 1956. $10.00)

In the introductory chapter the editor outlines the history of electrophysiology and its application to modern medicine. He traces the development over the last 200 years, and it is evident that most advances have been made in physiology laboratories and not in clinics. The physiology of muscle and nerve presents so many various aspects, involving so many different disciplines, that the wisdom of having different authors for every chapter is fully justified. Although each chapter deals with different aspects, there is some overlap, but this is an advantage since several points of view are expressed.

The electrophysiology of muscle has developed sporadically, usually with little or no contact with clincial medicine. Ever since the argument of Galvani and Volta as to the nature of "animal electricity" the theoretical aspect has been in advance of the clinical. This is well demonstrated in the present volume. The chapter on "The Basic Physiology of Nerve and Muscle" gives clear, straightforward descriptions and explanations. There is no question in the authors' minds of the value and accuracy of the information they are expounding. The sections dealing with the clinical aspects give the impression that they are striving hard to convince the reader of the value of the method. On the whole, the clinical chapters are rather disappointing, not because of the organization or presentation of the material, but because electromyography has relatively little to offer as a diagnostic or prognostic tool. The electromyography can demonstrate muscular spasm, denervation, reinnervation, and possibly gives some information about myopathies. But with the present state of knowledge it has not the clinical importance of the electrocardiogram or the electroencephalogram.

For any person having an interest in diseases of muscle, however, this is an excellent reference book. It contains in one volume papers on the major aspects of the physiology of nerve and muscle. These are well and clearly written. The clinical chapters define the method and with this guide even the beginner would have no difficulty in observing and obtaining suitable records.

This volume is the first of the projected series on physcial medicine. If the editor can maintain the standard of the present volume, the series will become a standard reference.

JOHN W. SCOTT, M. D.,
Toronto General Hospital

RORSCHACH LOCATION AND SCORING MANUAL. By *Leonard Small*. (New York: Grune & Stratton, 1956. $6.50.)

This manual fills the need of an ancillary text for the student of the Rorschach Test. In it the author has succeeded in presenting a graphic and systematic collection of data which will be of great value to both beginning students, as well as teachers of the fundamentals of the Rorschach Test.

One of the most important contributions of this manual is the systematic listing of the combined scoring experience of 18 eminent Rorschach experts including Rorschach, Oberholzer, Beck, Klopfer, Hertz, Loosli-Usteri, Rickers-Ovsiakina, and others. More than 6,000 responses are listed and scored as F + or F — in addition to the scoring for area, determinant, and content. Thus, in addition to Beck's already published norms for F+, this manual now makes available an ancillary collection of F + and F — responses gleaned from many experts of the Rorschach Test. Some criteria are now available for those responses not found in Beck's norms. A note of caution is needed in this respect to avoid confabulating F + norms of the various Rorschach workers. For those who utilize the various levels of F + percent according to Beck's norms, his list of F + and F — responses can only be used in considering the level of form accuracy.

For the beginning student who is using Beck's introductory text (*Rorschach's Test, I: Basic Processes*, Grune & Stratton, New York, 1949.), this manual may be regarded as a companion handbook. It presents graphically each of Beck's location areas for each of the 10 test figures. These location charts permit quick location of the scoring areas and this is further expedited by a convenient thumb-index system included in the pagination of the text. Each response listed is scored for area, determinant, and content. Beck's Z scores are also conveniently listed for each of the 10 test figures. Popular responses are also listed, but include only those of Beck and other workers, which coincide with his list of P responses. Content categories and abbreviations are also those used by Beck.

In general, this manual enhances the didactic value of Beck's introductory text by presenting the *mechanics* of his system in an ingenious, graphic and convenient fashion. The listing of the scoring of each of the 6,000 or more responses does have some limited value. However, the author himself cautions the beginner "against using the manual to score responses in a mechanical and rigid manner. The material offered here is guide to the scoring experience of leading workers, but can not be a substitute for the careful inquiry which is the mainstay of Rorschach procedure." The scoring of other Rorschach workers was converted by the author to Beck's symbols for consistency. However, it would be best to regard such conversions as extending beyond the mere exchange of one symbol for an equivalent Beck symbol. For example, this is especially true if one attempts to equate the numerous combinations of symbols for shading responses as scored by others, to the 3 more succinct shading symbols of Beck (V, Y, T). In spite of this, the numerous examples may be regarded as guideposts for the beginning student's problems in scoring. At least, the scoring examples create an awareness of all the determinants possible in any responses which have to be decided upon by an adequate inquiry.

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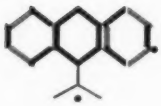

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1. Shepherd, M., and Watt, D.C.: J. Neurol., Neurosurg. & Psychiat. *19*:232 (August) 1956.

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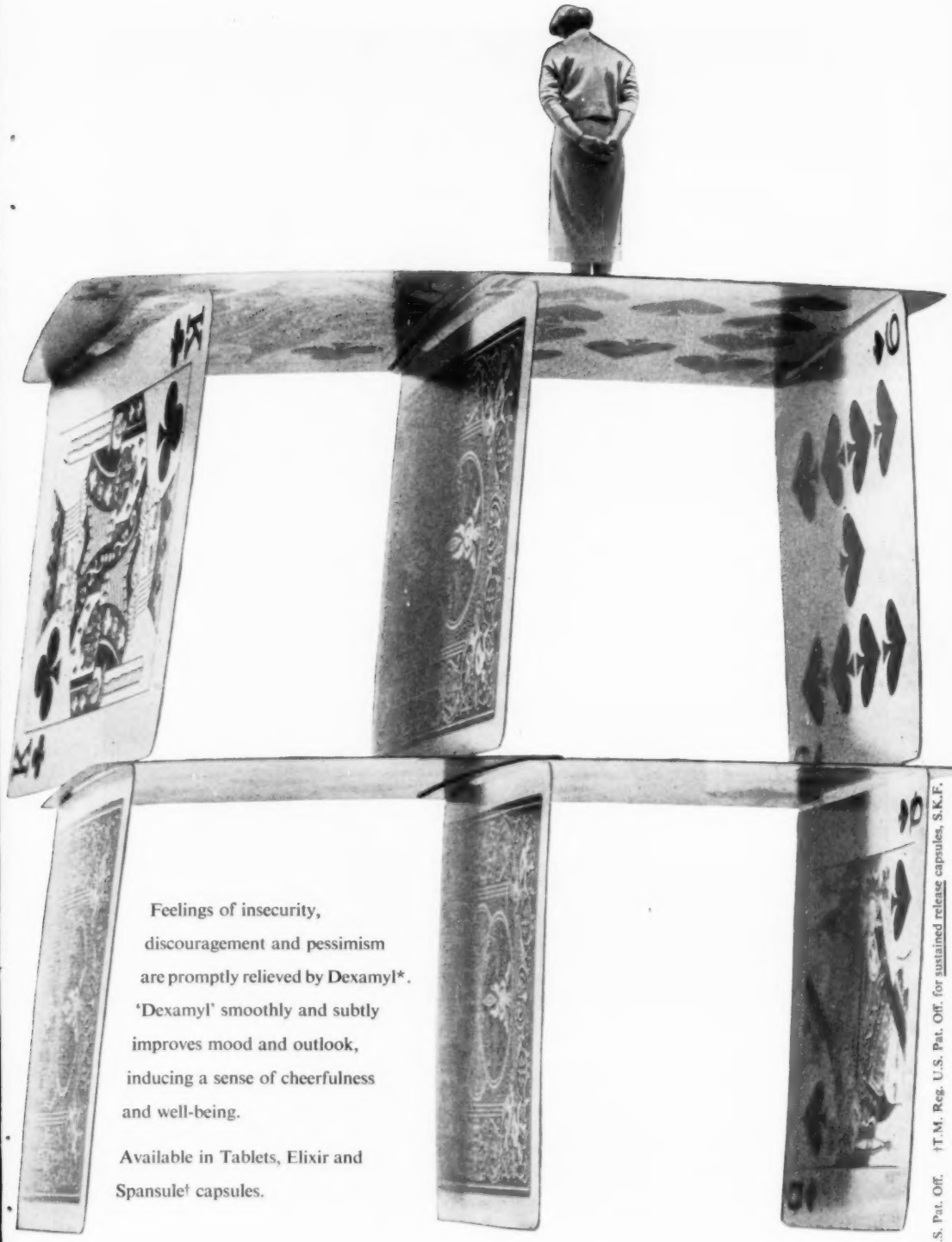

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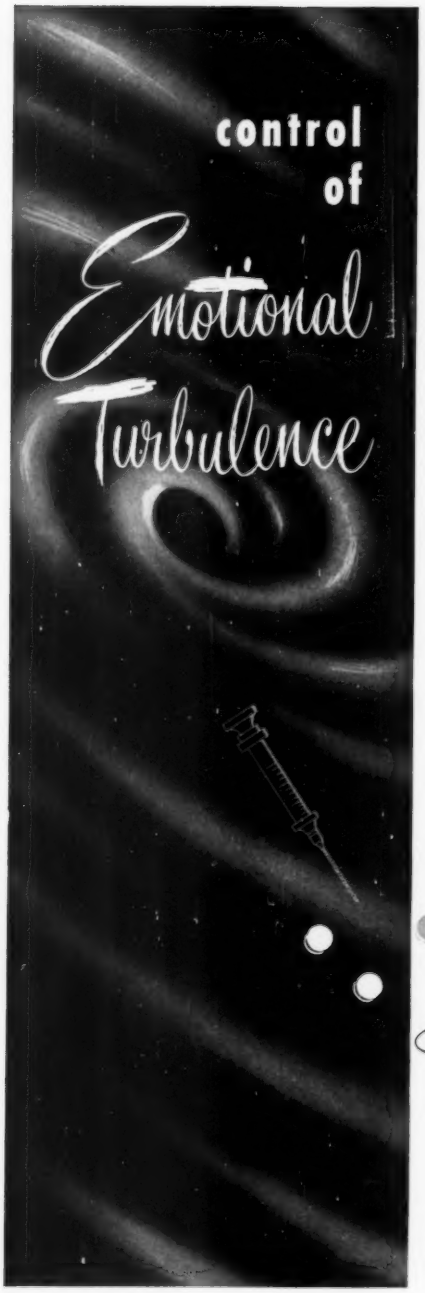

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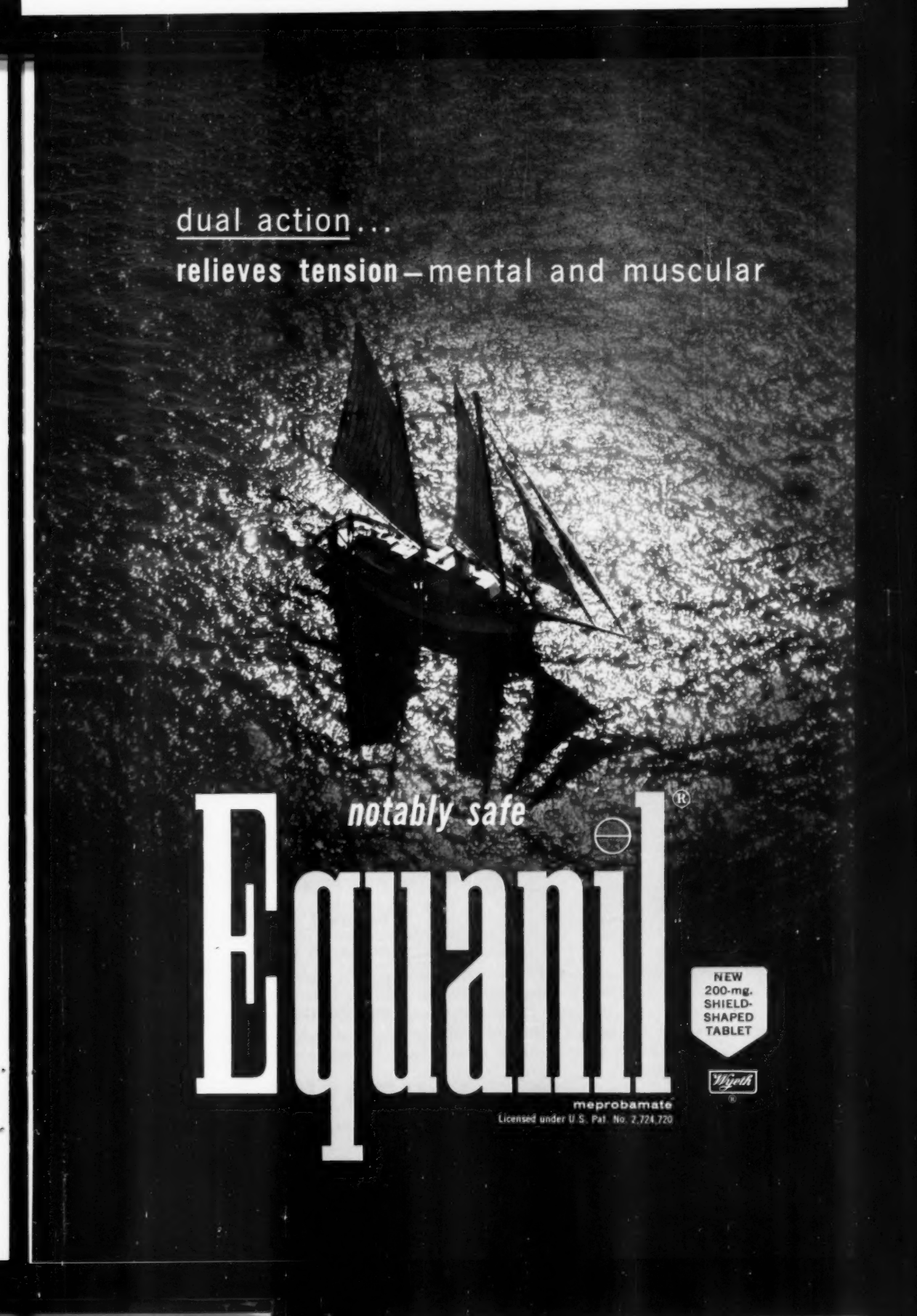
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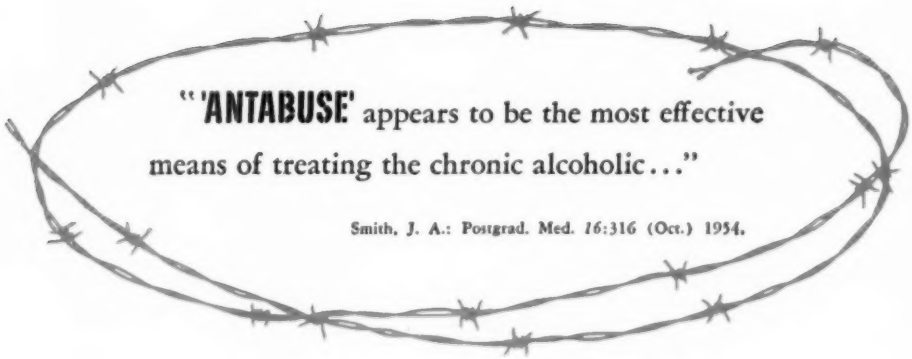

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Thus, from the acorn of an idea, has grown a stalwart tree, which is known as

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